March 10, 2022
Labor Market Reports
research@employamerica.org

Employ America Research Report

The Biden Administration Has The Power: Administrative Authority To Address The Crisis in Oil Supply Right Now

Alex Williams
Research Analyst, Employ America

Arnab Datta
Senior Counsel, Employ America

Skanda Amarnath
Executive Director, Employ America

Executive Summary

Energy security has taken on a renewed importance in the wake of Russia's invasion of Ukraine. There is a possibility that rising energy prices feed into higher and more broad-based inflation over the medium term. This risk necessitates an assertive federal response that breaks the current pattern of underinvestment among producers, alongside structural measures that mitigate fossil fuel demand.

While not always explicitly, lawmakers across the spectrum are calling for actions that support emissions through higher oil demand[1] over the short run[2] or higher oil production[3] over the long run, but fail to address the root cause of underinvestment. We seek to identify the tools that address the current political and economic constraints associated with crude oil prices in a direct and tailored manner. The response to the current crisis must be economically and politically viable in the short-term, while reducing our reliance on fossil fuels over the long-term.

This federal response has a dual goal: in the short run, it must break the current underinvestment equilibrium in oil production,[4] while in the long run, it must bring down oil demand through alternative transportation and energy solutions. Embedded in our proposal is a remedy to the oil "supercycle." This dynamic harms consumers through inflation on the upswing while stifling the energy transition on the downswing.

The administration can achieve these goals by using the Strategic Petroleum Reserve's exchange authority to guarantee demand for oil producers, the Treasury Department's Exchange Stabilization Fund to finance energy production, and the Defense Production Act to ease supply chain bottlenecks across various energy nodes. Coordinating these authorities could help break the equilibrium of underinvestment on the supply side, meaningfully address energy prices in the short and medium term, and net a return for the federal government, all within a structure that facilitates the transition to a greener, more secure and more sustainable economy.

Table of Contents

The Current Situation

Despite the scale of the current disruption in energy markets, the greatest energy challenge that the world faces is still climate change. As countries like Germany[5] and states like New York[6] and California[7] have been decommissioning nuclear plants, their energy mix has or will become dirtier.[8] The lesson their experience teaches is that simply turning off existing energy sources does not, by itself, guarantee that cleaner energy sources will replace them. Coordinating the transition to a greener economy will require active effort to scale down fossil fuel use while ensuring that short-term energy and transportation needs are consistently met.

The situation today represents a clear opportunity to achieve climate goals by joining them to geostrategic and national security goals which have different and often more powerful constituencies. Where these goals have often been opposed in the past, the present situation represents an opportunity to link them, and to bring the power of public-private coordination to bear on their achievement.

From this perspective, there is a substantial risk that the federal government's response to dislocations in the energy market will fail to link these two goals, and instead incentivize increased oil and gas production without a matching commitment to phase out once the worst of the shortage has passed. The Administration has so far reopened sanctions negotiations with Iran[9] and Venezuela[10] with a view to oil production, while simultaneously requesting increased production from foreign[11] and domestic producers. Lawmakers across the spectrum have called for band-aid non-solutions like a gas tax suspension,[12] offshore development or the authorization of the defunct Keystone XL Pipeline.[13] All of these responses will increase the demand for oil without breaking the pattern of private sector underinvestment. On the private-sector side, US producers have been slow to drill new wells,[14] reassuring shareholders that they learned the lessons of recent oil crashes and intend to invest less[15] in response to the elevated price of oil.

The policies proposed so far do little to curb the demand for oil, whether in the near term during the period of elevated prices, or in the long-term, when we will need to sharply curtail our oil use. The scale of the oil shock is sufficiently large[16] that measures to reduce use will be insufficient by themselves, but the manner in which the US incentivizes oil production is crucial to get right.

There are a series of inter-related constraints on any energy policy response to the Russian invasion.

1. **Fossil fuels are such a substantial source of current inflation,** and simply declining to invest in new production will produce politically and economically costly price increases.
2. **We need to substantially reduce fossil fuel consumption** in the current decade.
3. **The short-term supply crunch has led to an extreme and rising price premium,** while the prices for long-dated oil delivery have not moved nearly as much as spot prices.
4. **If we persuade foreign producers to increase production,** we lose control over the goals and scale of that production in the medium term. Losing control of production will likely lead to a failure to satisfy the second constraint.
5. **There are good national security and geostrategic reasons** to insulate the global economy from Russian oil, and the US economy in particular.

The ideal policy response threads the needle between each of these constraints, and ensures that climate action is economically and politically sustainable over the long term while alleviating the worst of the energy price pain felt today.

Energy Security, National Security and Climate Security

With Russia's invasion of Ukraine, inflation, and the extreme cost of natural gas in Europe,[17] energy security has taken on a new importance. Nearly all production requires energy, and if energy prices rise substantially, it is more plausible that we see sustained price pressures over the medium term. Finding a way to offset these pressures should be a core goal for policymakers looking to restrain the advance of inflation in the medium term.

Yet "energy security"[18] does not mean the same thing today as it did in the 1990s and 2000s. Back then, energy security was fundamentally a question of America's ability to meet its energy needs without excessive reliance on imported oil and gas. On the one hand, fracking has changed the calculus about where oil is and when it is available.[19] On the other hand, it is laughable amidst the climate emergency to describe access to large proven reserves of oil and gas[20] as "energy security." The space of problems that "energy security" must solve for today is larger than in the past, but thankfully, the technology to deliver real energy security has never been better.

Achieving energy security today requires that we minimize our demand for oil in the long run while addressing the short run impacts of dislocations in energy markets. Historically, oil production follows price, leading to what many refer to as a "supercycle."[21] High prices incentivize investment, but it takes time for price to translate to an investment decision and more time until investment translates into production. By the time capacity and production increase in response to past prices, there may be excess capacity relative to demand, causing prices to crash until production and investment are sufficiently reduced for the cycle to begin again. From the perspective of addressing our environmental and national security needs, this boom-bust cycle is far from ideal. Plans made when oil nears $100/bbl are scuttled when oil crashes below $30/bbl.[22] The result? On the upswing, consumers face inflation, and on the downswing, the energy transition becomes less economical.[23] Lawmakers should pursue policies that dampen this cycle– insulate consumers from elevated prices and price increases, while encouraging sustained demand for energy alternatives and transportation alternatives.

Arguably the most important aspect of climate policy is its political sustainability. This means that although climate is of the utmost importance, the solution for climate issues must be one that can be carried out within our existing political and economic infrastructure. While some have called for the complete abolition of the oil and gas industry,[24] doing so before sufficient alternatives mature is not a viable strategy. In states and countries that have moved away from nuclear energy without providing for new solutions, we see inflation, rising energy costs, and even higher greenhouse gas emissions[25] from switching back to coal or natural gas. Divesting from a specific method of producing energy does not necessarily fill in the energy gap left by divestment. When it comes to climate change and energy security, we should not simply "assume a can opener."[26]

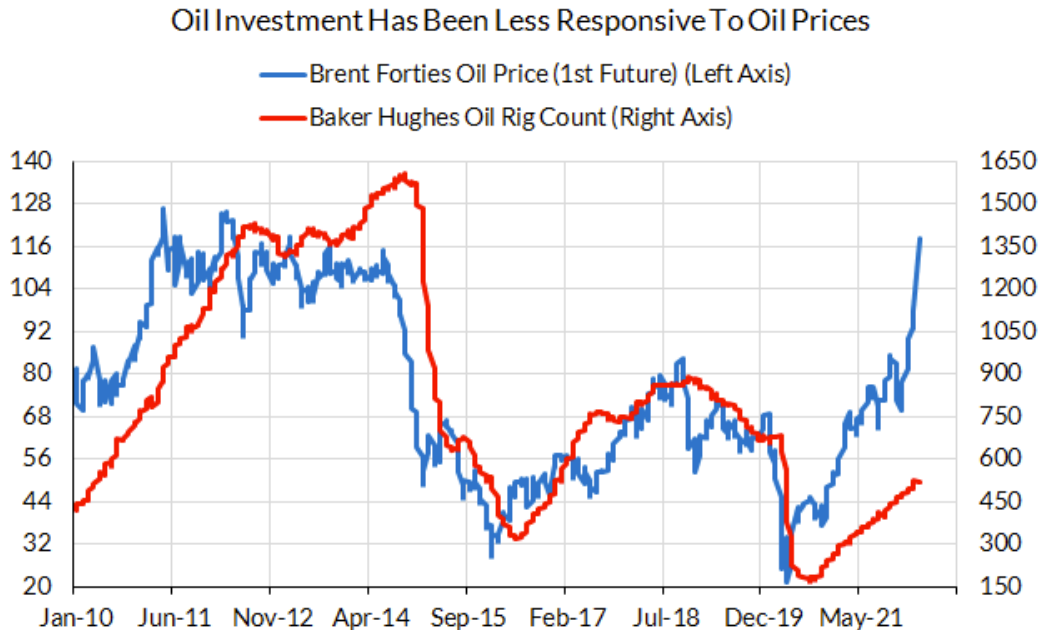
How To Start Fixing This Problem

Solving this problem will require active investment. On the one hand, active investment is needed to smooth supply chains and finance the development of alternative energy sources and a renewable grid. **On the other hand, policy must provide stable management of legacy energy sources to prevent excessive price volatility from turning into inflation or bad incentives.** When the price of oil rises too high, politically unsustainable inflation follows. While there is room to debate the magnitude, the relationship between presidential popularity and the price of gas is fairly well-established in the political science literature.[27] However, when the price of oil gets too low, it threatens to make alternative transportation options comparatively uneconomical and risks the abandonment of climate goals for short-term "economic efficiency."

There is substantial space for public-private coordination to prevent politically unsustainable inflation on one side, and environmentally unsustainable oil use on the other. Today, US onshore exploration and production[28] (E&P) is largely carried out by firms whose primary shareholders are very reluctant to approve new capital expenditures–ironically pursuing a "Keep It In The Ground"[29] strategy, albeit in pursuit of a different objective. The sequential oil price crashes in 2014-16,[30] 2018,[31] and 2020[32] have led the industry to use today's high prices as an opportunity to recoup losses, rather than an occasion to increase production. While keeping oil in the ground may be good from a long-term environmental perspective, insufficient investment from onshore E&P is liable to lead to higher and possibly even more persistently elevated inflation, as we endured in the mid-2000s.[33]

In response, we advocate a system of public-private coordination that uses the Strategic Petroleum Reserve,[34] the Exchange Stabilization Fund,[35] and the Defense Production Act[36] that, over time, can help ensure a healthier price range for oil while providing well-calibrated incentives for near-term short-cycle investment. This kind of system has the potential to be subject to substantial moral hazard, and as such, it is critical that its design be precise so as to avoid abuses or unintended consequences.

The following proposal would help break the current shareholder-driven tendency toward underinvestment in domestic oil production. Although investment is rising, it is becoming less sensitive to the price level than it has been over the prior decade.



Reliance on price signals alone to catalyze investment exposes our economic and national security interests to undue risks. We propose the following solution:

1. **Use the Strategic Petroleum Reserve's exchange authority** to offer predictable, guaranteed demand sufficient for oil producers to justify an investment response proportional to the crisis;

2. **Use the Treasury's Exchange Stabilization Fund** to complement the SPR's forward purchases by financing the drilling of new wells and other investments that structurally remedy supply-demand imbalances in oil markets; and

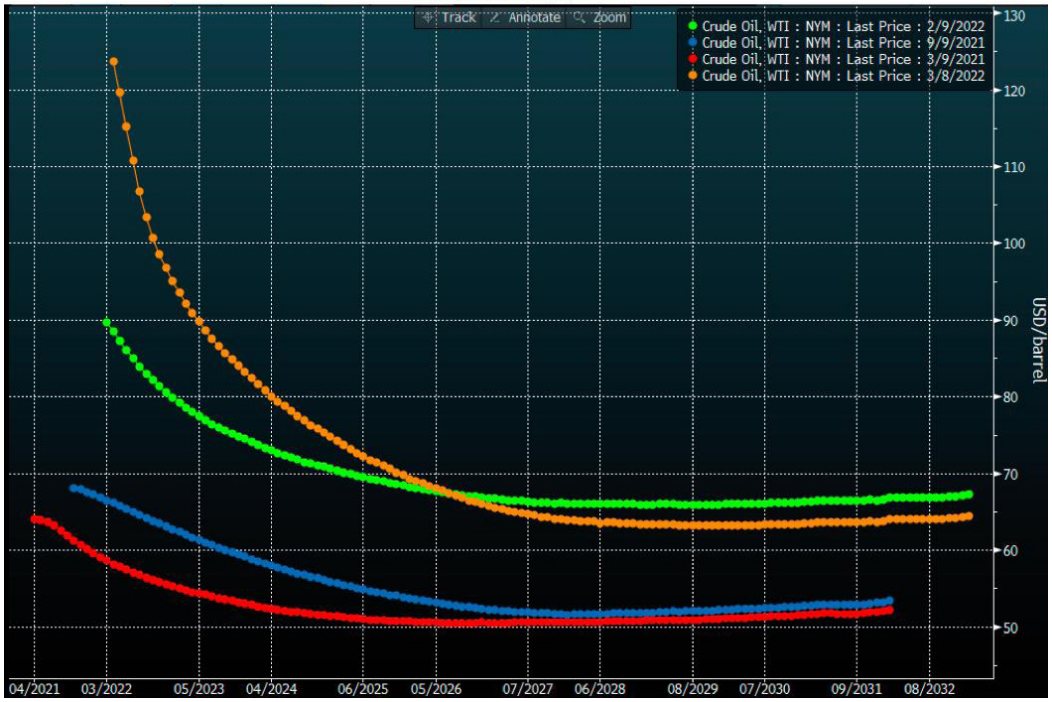
3. **Invoke the Defense Production Act,** where appropriate, to resolve domestic supply bottlenecks in energy production, both as it relates to oil production (fracking sand,[37] steel pipe[38]) and to alternatives[39] (battery materials). If the administration coordinates these actions, it could break the underinvestment pattern and meaningfully address soaring energy prices in the short- and medium-term.

Recommendation #1: Use the SPR's Exchange Authority to Relieve Current Price Pressure and Incentivize Medium-Term Production

The SPR should exchange crude oil in current storage for future storage, effectively selling crude oil out of storage now while committing to replenish the reserve 9-24 months later. Today, the crude futures curve is substantially backwardated: spot prices command a substantial premium over long-term contracted prices. The spot price of oil is currently over 30% above the 1-year forward price. This situation incentivizes private market participants to sell crude oil inventories today, which is consistent with what we observe in the inventory data.[40]

Oil Futures Curves, West Texas Intermediate

Source: Bloomberg



Since the SPR has inventory, and the ability to store crude oil for the future, it can and should help relieve pressure in the spot market. Critically, it can do so without disincentivizing future production by using its exchange authority. If done correctly, the simultaneous transaction should earn the taxpayer a net return.

The SPR would solicit proposals for exchanges, whereby it releases crude to a private intermediary in exchange for receiving the same quantity (plus a premium) of crude at a future date. The SPR would have to allow return dates of sufficient term to be of value to intermediaries (and the end oil producer), but most critically, it could require that returned barrels be sourced from producers' newly drilled wells not currently permitted or associated with the current rig count– ideally increasing investment and production at the margin.

Guaranteed forward demand, especially if customized such that marketable production from newly drilled wells is perfectly matched to the prices along the current futures curve, can turn what is otherwise a highly cyclical, high-risk investment proposition into a considerably lower-risk proposition. While there is a deep futures market that producers rely upon for hedging against some of the risk of oil price declines (often as a requirement from creditors), these hedges are imperfectly aligned with marketable production from a given well. Production timelines from a given well are somewhat forecastable, but there is still uncertainty that is costly for a producer to perfectly hedge in existing financial markets. Moreover, hedged production will limit the return on assets, and in the absence of correspondingly available and affordable credit, shareholder return expectations likely require higher prices and larger margins as an offset to the lower return on assets that hedged production entails. The customized nature of the forward acquisition of oil would impose a mild transaction cost, but one that a producer should and would be willing to bear if also given access to the appropriate debt financing terms for said new investment.

To ensure that the increased production does not result in oil prices falling to levels that encourage additional fossil fuel usage in the long-term, a symmetric measure to prevent bloated private inventories and oil prices well below the breakeven for investment ($45-$60/barrel as of March 2021, according to the Federal Reserve Bank of Dallas)[41] is also worth exploring as a matter of DOE rulemaking (and legislating if possible). Such an arrangement would likely have to involve some collective commitments across regulators and producers regarding investment and production, but could also produce collective benefits that limit excessive price volatility. The SPR would also need ample spare storage capacity in such instances.

The broad legal discretion and authority granted to the SPR allows creative contractual arrangements. 42 U.S.C. 6239(f)(5)[42] and 42 U.S.C. 6240[43] authorize the Secretary of Energy to acquire petroleum products for storage in the SPR by "exchange." 10 CFR 626.2[44], the regulation issued to carry out exchanges, defines them as:

> ***"a process whereby petroleum owned by or due to the SPR is provided to a person or contractor in return for petroleum of comparable quality plus a premium quantity of petroleum delivered to the SPR in the future, or when SPR petroleum is traded for petroleum of a different quality for operational reasons based on the relative values of the quantities traded."***

Because the "premium" is not specifically defined to any particular percent or quantity–the administration could offer that flexibility to prioritize the right incentive structure. The SPR's broad authority to use exchanges (and to determine the terms through contracting and negotiation) allow creative structures that can provide the kind of certainty that oil producers generally lack, or simply forgo. Instead of high and volatile margins, the combination of SPR and ESF authorities enable producers to apply financial leverage to hedged production, delivering a similar or better risk-adjusted return at a lower oil price.

Recommendation #2: Utilize the Department of Treasury's Exchange Stabilization Fund to Finance Measures That Alleviate Supply-Demand Imbalances in Oil Markets

Breaking the trend towards "capital discipline" among existing producers is critical to the success of our proposal. Given the havoc energy prices are causing throughout the global economy, Treasury's Exchange Stabilization Fund (ESF) should set up a facility to support the financing of domestic energy production.

The ESF has the authority to purchase "instruments of credit and securities the Secretary considers necessary." In the past, the ESF has been used by both Democratic and Republican Presidents to alleviate foreign exchange crises, like the Mexican Peso Crisis of 1994,[45] but also financial and economic crises like the March 2020 COVID-19 panic (even before[46] the CARES Act was enacted).

Tying the SPR exchanges described above to affordable financing should incentivize otherwise debt-averse producers into borrowing, investing, and producing larger volumes at a lower price and margin. In order to avoid creating a standing oil subsidy, this investment facility should also have a clear sunset whose timeline aligns with the time horizons of short-cycle shale production. Decline rates[47] – the rates at which wells exhausts the underlying oil – on shale production assets are substantially higher than other modes of oil production.[48]

Furthermore, the facility could also promote investments that structurally reduce the demand for crude oil, though most of these investments likely require a longer time horizon and a different financing mechanism. While oil is used for a number of purposes, its dominant purpose[49] is as a transportation fuel source. Investments that support modes of transportation not dependent on oil should be accelerated right now. Giving the facility a broad mandate to remedy the price volatility in global energy markets would offer administrative flexibility to identify investments that strategically reduce the demand for oil too. This use of the facility would be even more powerful if the energy provisions from the (now defunct?) Build Back Better plan are enacted to secure final demand tied to these investments. According to one analysis,[50] the electric vehicle provisions alone could reduce oil demand by over 180 million barrels per year by 2030.

The ESF statute provides broad discretion and authority[51] to the Secretary of Treasury. 31 U.S.C. 5302[52] authorizes the Secretary to "deal in… instruments of credit and securities," in ways she deems necessary and consistent with the Federal Government's obligations in the International Monetary Fund. These obligations provide the legal rationale for utilizing the ESF. Additionally, investments to dampen commodity price volatility can help support greater exchange rate stability among major and critical trading partners. Efforts to alleviate these pressures are well-aligned with our obligations to the IMF, which include to "direct economic and financial policies towards the objective of fostering orderly economic growth with reasonable price stability" and to "promote stability by fostering orderly underlying economic and financial conditions and a monetary system that does not tend to produce erratic disruptions."

Recommendation #3: Invoke the Defense Production Act to Resolve Energy Supply Chain Bottlenecks

The current circumstances may justify a more expansive usage of the Defense Production Act (DPA) to resolve domestic supply chain bottlenecks. Although capital discipline and shareholder priorities are the primary reason for the slow investment response among short-cycle shale producers, supply chain bottlenecks and input cost inflation also play a part. Volatility in the prices of a variety of inputs have likely caused producers to set their price thresholds for investment even higher, so as to ensure sufficient cushion against the possibility that oil prices fall below their breakeven profit levels. Although rig counts are rising, and markets may be adjusting to new demands, shortages in steel pipe, fracking sand, and other key inputs may be stifling the speed of the investment response. The authority to prioritize procurement of such critical inputs under the DPA may prove useful.

Furthermore, the time is ripe to deal with significant outstanding issues in the battery supply chain. While the technology for electric vehicles has matured, production capacity has seriously lagged. National security needs, supply chain disruptions, and the present inflationary challenges all call for expansive willingness to use the DPA to accelerate investments vital to the structural reduction of crude oil demand.

The DPA's production and allocation authority has been used[53] throughout the pandemic.[54] The Russian invasion of Ukraine, and the associated effects in the energy market justify invocation to shore up domestic supply chains for energy production. 50 U.S.C. 4511(c)[55] authorizes the President to "by rule or order, require the allocation of, or the priority performance under contracts or orders (other than contracts of employment) relating to, materials, equipment, and services in order to maximize domestic energy supplies."

Conclusion

As events in Europe have shown, energy security is critical. Energy prices have long been among the most volatile, as oil drillers pursued a boom-bust-boom production approach. Curtailing this volatility while encouraging near-term production is critical to achieving our national security goals as well as long-term climate goals.

The position we are in now with respect to the climate is not a good one, and this is far from an optimal policy. However, we have to do our best with the political, economic and environmental situation that we do have, rather than trying to simply wish-cast our way into a different reality. Constraining inflation while achieving energy security – all within a politically-resilient approach – is a difficult lift. Politicians and commentators on both the right and the left will find things to applaud and things to deplore about this policy approach, but now is a time for thinking realistically about the set of constraints and the coordination mechanisms that can be used to overcome them.

View Online

References

1. https://www.hassan.senate.gov/news/in-the-news/senator-hassan-leads-efforts-to-lower-gas-prices-for-granite-staters
2. https://twitter.com/senwarren/status/1462145283933016067
3. https://yallpolitics.com/2022/02/08/hyde-smith-says-biden-administration-is-slow-walking-offshore-energy-imperiling-production-outlook/
4. https://www.wsj.com/articles/u-s-shale-producers-sing-the-same-tune-11646051580
5. https://abcnews.go.com/International/wireStory/correction-germany-nuclear-shutdown-story-82051054
6. https://www.eia.gov/todayinenergy/detail.php?id=47776
7. https://www.cnbc.com/2021/10/02/why-is-california-closing-diablo-canyon-nuclear-plant.html
8. https://www.dec.ny.gov/docs/administration_pdf/ghgsumrpt21.pdf
9. https://www.cnn.com/2022/03/03/politics/iran-nuclear-deal-us/index.html
10. https://www.latimes.com/politics/story/2022-03-07/u-s-considering-ban-on-russian-oil-easing-sanctions-on-venezuela
11. https://www.politico.com/news/2022/03/07/white-house-oil-deals-saudi-arabia-venezuela-iran-00014803
12. https://boston.cbslocal.com/2022/02/09/federal-gas-tax-suspension-bill-prices-hassan/
13. https://www.blackburn.senate.gov/services/files/10C46F2D-9EAC-43ED-B498-C770E06C6202
14. https://www.wsj.com/articles/frackers-say-bottlenecks-slow-them-from-ramping-up-as-oil-prices-soar-11646835536
15. https://www.spglobal.com/commodity-insights/en/market-insights/latest-news/oil/021722-pioneer-marathon-raise-capital-budgets-but-keep-output-targets-flattish
16. https://www.nytimes.com/2022/03/09/business/energy-environment/russia-oil-global-economy.html
17. https://qz.com/2138680/natural-gas-prices-in-europe-hit-an-all-time-high/
18. https://www.theatlantic.com/science/archive/2022/03/us-oil-natural-gas-price-surge-energy-independence/626979/
19. https://www.dallasfed.org/-/media/documents/research/papers/2020/wp2021.pdf
20. https://www.eia.gov/todayinenergy/detail.php?id=14431
21. https://www.fool.com/investing/how-to-invest/stocks/supercycle/#:~:text=A%20supercycle%20is%20defined%20as,demand%20for%20products%20and%20services.
22. https://money.cnn.com/2016/01/12/investing/oil-prices-below-30/index.html
23. https://energypolicy.columbia.edu/sites/default/files/How%20Lower%20Oil%20Prices%20Impact%20the%20Competitiveness%20of%20Oil%20with%20Renewable%20Fuels_October%202015.pdf
24. https://www.businessinsider.com/solve-climate-change-crisis-abolish-fossil-fuels-oil-gas-2021-10

References

25. https://www.eenews.net/articles/3-states-with-shuttered-nuclear-plants-see-emissions-rise
26. https://en.wikipedia.org/wiki/Assume_a_can_opener
27. https://pprg.stanford.edu/wp-content/uploads/Presidential-Approval-and-Gas-Prices.pdf
28. https://www.investopedia.com/terms/e/exploration-production-company.asp
29. http://keepitintheground.org/
30. https://blogs.worldbank.org/developmenttalk/what-triggered-oil-price-plunge-2014-2016-and-why-it-failed-deliver-economic-impetus-eight-charts
31. https://www.cnn.com/2018/11/21/investing/oil-prices-trump-saudi-arabia/index.html
32. https://www.investopedia.com/articles/investing/100615/will-oil-prices-go-2017.asp#:~:text=Oil%20prices%20plunged%20in%20the,Arabia%2C%20two%20major%20oil%20producers.
33. https://money.cnn.com/magazines/moneymag/moneymag_archive/2005/03/01/8251181/index.htm
34. https://www.energy.gov/fecm/strategic-petroleum-reserve-9
35. https://home.treasury.gov/policy-issues/international/exchange-stabilization-fund
36. https://www.cfr.org/in-brief/what-defense-production-act
37. https://www.reuters.com/business/energy/oil-prices-soar-us-drillers-scramble-find-sand-fracking-2022-02-15/
38. https://www.reuters.com/business/energy/energy-prices-soar-supply-chain-snags-threaten-us-oil-output-gains-2021-11-15/
39. https://www.energy.gov/sites/default/files/2022-02/America%E2%80%99s%20Strategy%20to%20Secure%20the%20Supply%20Chain%20for%20a%20Robust%20Clean%20Energy%20Transition%20FINAL.docx_0.pdf
40. https://www.eia.gov/petroleum/supply/weekly/pdf/figure1.pdf
41. https://www.dallasfed.org/-/media/Documents/research/energy/energycharts.pdf?la=en
42. https://www.law.cornell.edu/uscode/text/42/6239
43. https://www.law.cornell.edu/uscode/text/42/6240
44. https://www.govinfo.gov/content/pkg/CFR-2016-title10-vol4/pdf/CFR-2016-title10-vol4-sec626-2.pdf
45. https://www.google.com/search?q=olc+opinion+exchange+stabilization+fund&ei=rsMoYpn_ AZbQytMPkJ2SiAE&ved=0ahUKEwiZjtmeqLn2AhUWqHIEHZCOBBEQ4dUDCA4&uact=5&oq=olc+opinion+exchange+stabilization+fund&gs_lcp=Cgdnd3Mtd2l6EAMyBwghEAoQoAE6BwgAEEcQsAM6BQgAEIAEOgYIABAWEB46BQghEKABOggIIRAWEB0QHkoECEEYAEoECEYYAFCzAljHFmCwF2gBcAF4AYABnwKIAawekgEGMC4yNi4xmAEAoAEByAEIwAEB&sclient=gws-wiz
46. https://www.reuters.com/article/us-health-coronavirus-credit-idUSKBN2142QG
47. https://www.eia.gov/analysis/drilling/curve_analysis/

References

48. https://www.hartenergy.com/exclusives/why-us-shale-production-declines-are-higher-you-might-think-188251
49. https://www.eia.gov/energyexplained/oil-and-petroleum-products/use-of-oil.php
50. https://energyinnovation.org/wp-content/uploads/2022/03/Congressional-Proposals-and-U.S.-Energy-Security-EPS-Modeling.pdf
51. https://www.justice.gov/olc/opinion/use-exchange-stabilization-fund-provide-loans-and-credits-mexico
52. https://www.law.cornell.edu/uscode/text/31/5302
53. https://www.cfr.org/in-brief/what-defense-production-act
54. https://www.arnoldporter.com/en/perspectives/publications/2021/01/expanded-use-of-the-dpa
55. https://www.law.cornell.edu/uscode/text/50/4511