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National Security and Domestic Oil Depletion

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National Security and Domestic Oil Depletion

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Abstract

American politicians often take it for granted that national security would be enhanced by accelerating domestic oil production, through policies such as subsidies, tax advantages, opening up federal lands for drilling at artificially low charges, and relaxing environmental regulation. This note argues that such policies actually hurt national security in the long term, by depleting domestic reserves. It proposes saving some of the deposits located offshore and under shale beds for a future emergency, by withholding federal permits for now, by reversing current artificial subsidies to production, and by a tax to encourage conservation.

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Journalists frequently point out that every president since Richard Nixon has set an objective of reducing oil imports in order to enhance national security. Until recently, experts were confident that the objective of eliminating US oil imports altogether was a chimera, unless perhaps there were very large increases in the domestic price of oil to discourage consumption and encourage new sources of domestic supply.

Energy security again became an issue in the 2012 presidential campaign. On the Republican side, Mitt Romney campaigned on a [platform](#) of restoring “energy independence” for North America by 2020.¹ He wanted to facilitate drilling on federal lands, to open part of the

¹ By “North American energy independence,” Romney meant that US demand would be met entirely by domestic production plus imports from Canada and Mexico.

southeast coast for oil development, and to relax regulation of the oil industry on private lands as well. The policy was a continuation of the “Drill, Baby, Drill” platform that we heard in the 2008 election campaign. Meanwhile on the Democratic side, President Obama called for an “all of the above” strategy, which similarly presumed that accelerated pumping of oil would be good for national security.

1. What is energy security?

The tension has long been between those who give primacy to the environment, on the one hand, and those who give primacy to business on the other. Some of the first group may oppose all oil drilling and some of the latter may support all oil drilling (even if it is the result of artificial government subsidies, explicit or implicit). The right answer lies in between.

Especially since September 11, 2001, the energy security argument is often viewed as able to tip the balance between the dueling environmental and business arguments. Usually it is taken as self-evident that the energy security goal argues in the direction of increased exploitation of domestic oil resources: “Drill Here, Drill Now.” But some of us have long thought that a more appropriate slogan for the policy of using domestic reserves as aggressively as possibly would be “Drain America First.” A true understanding of energy security could tip the balance the other way instead, in the direction of conserving American energy resources.

The belief that an increase in domestic oil production is good for national security has contributed to policies such as oil depletion allowances and other tax benefits, federal leases to domestic oil firms at artificially low rates, protectionist barriers to oil imports, relaxed regulatory attitudes toward oil spills and other environmental dangers, and other subsidies to domestic production. This note questions the logic that national security argues in favor of accelerating domestic production. Thus its policy recommendations are at odds with what many politicians believe.

It is easy to see why dependence on oil imports is seen as inimical to energy security and threatening to national security. Many of the world's major oil exporters are politically unstable and/or unfriendly to the United States. This is particularly true of the Middle East. Crises have repeatedly originated in that part of the world, leading to sharp declines in the supply of oil or increases in the price or both. Four of the most obvious are the Suez crisis of 1956, the Arab oil embargo of 1973, the Iranian Revolution of 1979, and the Iraqi invasion of Kuwait in 1990. These oil price increases have in turn been implicated in many post-war recessions.²

Even when national security is defined in narrow politico/military terms – rather than in economic terms – energy imports enter the equation as well. First, military operations are highly oil-intensive. Second, the US is far more willing to bend political positions, invest military assets, and go to war in countries where oil supplies are at stake than where they are not. Among the most salient examples are the 1990-91 war in Kuwait, the prolonged stationing of troops in Saudi Arabia, and the 2003-2011 war in Iraq.

How then could policies to increase domestic production as rapidly as possible -- and so reduce imports -- *not* improve security?

Public debate is hampered by the lack of a working definition of energy security. What is “energy independence” supposed to mean? A goal of ending imports from specific geographic regions such as the Mideast would not be relevant, because oil is mostly fungible. An oil crisis would raise the global price and thus have virtually the same effect on the American economy regardless whether the supply cut-off occurs in a region where we had been buying our oil or some other region.³

What, then, should be the goal of energy security policy? Imagine that at some point in the coming half-century, there is a sudden cut-off in oil exports from the Persian Gulf (or the

² James D. Hamilton, “[Historical Oil Shocks](#),” February 2011, UCSD; forthcoming, *The Handbook of Major Events in Economic History*, edited by Randall Parker and Robert Whaples (Routledge, 2013).

³ William Hogan, “[Hedging Against Uncertainty: US Strategy in an Interdependent World](#),” *National Strategy Forum Review*, Summer 2008. This basic point of economic theory does not apply 100%, because of the existence of contracts and longer term relationships and because there are different kinds of oil. Not all oil is traded on a unified homogeneous spot market. But when considering big oil shocks, the basic economic logic holds to a first approximation.

Arabian Gulf, as our non-Iranian friends on the Arabian Peninsula prefer to call it). The geo-political crisis that would cause such a cut-off might be military conflict between the US and Iran, an Islamist revolution in Saudi Arabia, or terrorist use of radiological weapons.

Precedents, of course, include the oil shocks of 1973-74 (precipitated by the Arab oil embargo in connection with the Yom Kippur War), 1979 (the fall of the Shah of Iran) and 1990 (Iraq's invasion of Kuwait).

What would be the impact of a big new shock on the economy of the US and other industrial countries? The quantity of oil in the Strategic Petroleum Reserve (SPR) could at best help tide us over only for a few months. If the global crisis threatened to go on for years, the economic effects could be severe. This fact currently constrains US foreign policy and military policy, which is part of what we mean by the phrase energy security. Also important for our national security are two more points. First, our oil imports transfer every year many billions of dollars to dictators and extremists who are potential enemies. Second, our military runs on oil. So did Japan's in December 1941, which is largely why it went to war and headed for Southeast Asia, and Germany's, which is why Hitler's armies at the same time headed for the Caucasus rather than Moscow.

The goal of policy now should be to take steps that would reduce the impact of such a shock in the future, creating non-military response options. *The solution is to leave some domestic oil reserves underground, or underwater, to be tapped in such emergencies, and only in such emergencies.* Think of these reserves like the Strategic Petroleum Reserve (SPR), but without going to the trouble of bringing the oil above ground only to pump it back underground. This approach is the opposite of the dominant political instinct of accelerating domestic production.

2. Historical origins of the national security argument

US oil production in the lower 48 states peaked in 1970, as famously forecast by Hubbert (1956).⁴ The depletion of domestic oil reserves had been accelerated by years of government policies that in various ways subsidized domestic production, often by means of the argument that this was good for national security. A brief review of this history is in order. (More details on the policies are given in an Appendix.)

The United States discovered during World War I that oil was important to military operations and then discovered during World War II that it was absolutely vital. But presidents during the 1940s and 1950s did not think that national security necessarily called for maximizing the rate of development and pumping of domestic oil reserves. To the contrary, they were concerned that with domestic consumption growing so rapidly, domestic oil supplies might be depleted in the future. As Daniel Yergin documented in *The Prize*, American officials instead accepted the “conservation” theory, which called for steps to slow domestic production.⁵ Harold L. Ickes (President Roosevelt’s Secretary of the Interior, 1933-1946; pp.377-382⁶) and James Forrestal (President Truman’s Secretary of the Navy and of Defense; pp.388-89⁷) became

⁴ Marion King Hubbert, 1956, “Nuclear Energy and the Fossil Fuels” (presented at The Spring Meeting of the Southern District, Division of Production, American Petroleum Institute, San Antonio, Texas, March 7-9). Publication No. 95 of Shell Development Company, Exploration and Production Research Division, Houston Texas, June 1956. Available online at: <http://www.hubbertpeak.com/hubbert/1956/1956.pdf>.

⁵ *The Prize: The Epic Quest for Oil, Money and Power* (Free Press: NY, 2009 edition). “Conservation” at this time referred to a policy of slower and more careful domestic pumping, without today’s emphasis on reduced demand. It was associated with the efforts of oil man Henry Doherty from 1923 onward.

Other oil producers initially opposed the conservation theory, but then suddenly started supporting it in 1927 and throughout the 1930s in response to low domestic oil prices. The big oil companies successively pushed for “pro-rationing” to limit production by small independents (which they viewed as excessive and irresponsible) via the Texas Railroad Commission and other similar state agencies. (See also Norman Nordhauser, 1973, “Origins of Federal Oil Regulation in the 1920’s,” *The Business History Review* vol. 47, no. 1, spring, pp.53-71.) After 1933 the oilmen even aligned in this effort with federal regulation under Franklin Roosevelt’s New Deal.

⁶ Ickes would have preferred to go so far as direct US government involvement in developing new Saudi oil infrastructure, a policy called “solidification” at the time (pp.378-380), rather than merely supporting the Saudi king and encouraging him to make deals with American oil companies.

⁷ “If we ever got into another World War it is quite possible that we would not have access to reserves held in the Middle East but in the meantime the use of those reserves would prevent the depletion of our own...” p. 389. [Footnote 22, cites Forrestal’s correspondence]. Yergin (p.410) also cites similar arguments made at this time in a book by Eugene Rostow (1948), *A National Policy for the Oil Industry* (Yale University Press: New Haven), and a 1948 review by the National Security Resources Board, and in 1958).

convinced of the need to go abroad for oil. They strategically sought to foster international political conditions that would allow the west to get its oil in the new fields of the Persian Gulf, in particular, as an alternative to remaining entirely dependent on limited North American reserves. This was the origin of the long-time alliance between the United States and the Kingdom of Saudi Arabia.

Independent Texas oil producers strenuously opposed oil purchases from the Persian Gulf, especially after 1948 when US imports of petroleum (crude plus refined products) climbed above exports for the first time. They began to make the argument that oil imports were bad for national security, and persuaded Congress to incorporate such logic into the 1955 Trade Act. The national security argument for reducing imports was rejected by John Foster Dulles and Clarence Randall, who were, respectively, President Eisenhower's Secretary of State, 1953-1959, and Council on Foreign Economic Policy Chairman, 1956-1960 (Yergin, p.519). Eisenhower himself was also opposed to the campaign against oil imports, preferring free trade. But he finally succumbed in 1959 to political pressure for mandatory import quotas from small Texas oil companies (p.520), who tended to be big campaign contributors to Republicans and Democrats alike. The import quotas were rationalized as necessary because "crude oil and the principal crude oil derivatives and products are being imported in such quantities and under such circumstances as to threaten to impair the national security."⁸

The self-interested desire by independent oil producers and their congressional representatives to seek federal subsidies and limit oil imports is similar today to what it was 60 years ago. What is more recent is that presidents and presidential candidates should lead the charge in the name of national security.

3. A strategy for true energy security

⁸ From Presidential Proclamation 3279. Charles J. Cicchetti and William J. Gillen (July 1973), "The Mandatory Oil Import Quote Program: A Consideration of Economic Efficiency and Equity," *Natural Resources Journal*.

The U.S. officials in the 1940s and 1950s were right in thinking that national security is not a valid reason to run down domestic oil reserves as quickly as possible. A strategy for true energy security would seek to retain some domestic reserves for the future.

Many policy tools are available for preserving a portion of these deposits. They tend to fall into two categories. The first set of tools has to do with the process of permitting and regulation; the second has to do with the price mechanism.

First, where the federal government is the one to make the decision whether and when to open up an area for drilling⁹, the exploitation of new oil fields could be made conditional on a true national emergency. An example of a triggering event would be a long-term cut-off of Persian Gulf oil resulting in a global oil price above \$250 a barrel.¹⁰ Second, with respect to all lands, private or public, we should resist the rush to relax health and environmental regulations. The case for caution has been strengthened by such disasters as the Deepwater Horizon oil spill of 2010. The quality of regulation is at least as important as the extent of regulation. More policy options to slow domestic pumping are discussed in the next section.

The oil market has a dual nature: it is determined by “flow” supply and demand, like the markets for other goods and services, and simultaneously by “stock” supply and demand, like assets. The Strategic Petroleum Reserve and counterpart stockpiles in other countries can help meet a surge in net demand in a flow sense. But they would be of little help if the disruption were of a permanent or long-term nature. A historic example was the quadrupling of oil prices that took place when OPEC flexed its power for the first time at the end of 1973. A hypothetical future example could be the overthrow of the conservative monarchy in Saudi Arabia.

⁹ Robert Hahn and Peter Passell, 2008, “The Economics of Allowing More Domestic Oil Drilling,” [Reg-Markets Center Working Paper No. 08-21](#), American Enterprise Institute, September 9.

¹⁰ Frankel, “[Real Energy Security: Drill, Baby, Drill—But Not Now](#),” Dec.3, 2010, [Weekly Policy Commentary, Resources for the Future](#). In practice presidents might be tempted to invoke the trigger and release supplies when gasoline prices go up in the summer of an election year. This temptation has long existed under the SPR. (Blake Clayton, “Lessons Learned from the 2011 Strategic Petroleum Reserve Release,” CFR Working Paper, September 2012.) A president should announce ahead of time the sort of development that would be serious enough to constitute a trigger: e.g., a cut-off in oil coming out of the Persian Gulf or – less extreme – military conflict in that region that causes insurance rates on oil tankers along with oil prices themselves to rise far above their historical highpoints [in real terms].

Arbitrage across time implies that today's price is tied to expectations of the price ten years into the future. This is where the argument for conserving oil reserves at home comes in. It applies as well to supplies in other friendly countries. The SPR is a bridge; but a bridge is of little use without an opposite shore.

The argument doesn't work as well in the case of oil reserves in the North Slope of Alaska. Experts say it takes more than a decade from initial exploration to pumping oil: in such remote locations drilling and pipeline-laying take years. Conventional onshore oil deposits in the lower 48 states have already been largely depleted — mostly at far lower prices than exist today, and often under the same short-sighted energy security logic of “drill here, drill now.”

The two kinds of deposits that are probably the best candidates for saving are (i) some of those located underwater in the continental shelf offshore of southern states (in the Gulf of Mexico and the Atlantic), (ii) some of the deposits located under shale beds which are currently undergoing rapid development. The development lags are shorter than in the Arctic and the supplies of both offshore deposits and shale oil are substantial.

In the case of known oil deposits that are located offshore, there could be a substantial lag between the date of a geopolitical crisis and the date when the oil would start flowing. The same is true even in case of deposits located under shale. But this is not grounds for dismissing the proposal.

To see why, one must first realize that most of the famous Mideastern oil crises, even the ones that led to immediate sharp increases in the world price of oil and subsequent recessions, did *not* in fact take the form of a sharp reduction in Mideastern oil exports to the United States, let alone a general cut-off in exports from that region to the world at large. Rather they led to fears that oil supplies would decline and prices rise *in the future*. In response to this risk, rational speculation sharply increased the demand to hold oil in inventories. Oil storage hit peak capacity: companies filled all their tanks and their tankers, consumers kept their gas tanks as full as they could, etc. The increased demand for inventories bid up the world price of oil, which had

virtually the same psychological and macroeconomic impacts as if the supply cut-off had already gone into effect.¹¹

The point is that, if there were to be a sudden new oil shock in the Mideast, the knowledge that some replacement supplies would come on-stream domestically in the future, and so the economy would not be left high and dry, would help moderate the speculative panic. Thus even in the short term after a shock, the awareness of future supplies would allow firms to hold lower inventories than otherwise and the market price would not go up as much as otherwise.

We should look for ways to reduce the lag in response to an oil shock. One could imagine the government paying the upfront costs of exploration and development and then the costs of capping the wells, essentially creating surge capacity of the sort that Saudi Arabia has often kept on standby. This is likely to be too expensive for the US, especially at a time of budgetary stringency. But other steps may be possible. Much of the lag is in the process of obtaining leases (whether from private landowners or the government) and obtaining permits. Perhaps the government could grant some leases and permits ahead of time, contingent on the trigger.

Here is another, more radical, idea. Perhaps, before opening up new oilfields as the 2012 Republican presidential candidate proposed, the government could institute a “pairing policy.” Under the pairing policy, for every new permit issued to a given oil company to allow drilling now, another permit could be granted to the same company with a restriction that drilling cannot begin unless and until the trigger is hit. Or else, to reduce the lag in emergency response further: for every new well that an oil company is allowed to drill and tap, it must drill and *cap* another one. When the company specified the pair on which it wanted permits, it would not be allowed to choose which of the two sites was for immediate use and which to be held in reserve. The

¹¹ Evidence of a statistically significant effect of geopolitical risk on the demand for oil inventories is offered by Table 2 in Frankel (2008) “The Effect of Monetary Policy on Real Commodity Prices,” in *Asset Prices & Monetary Policy*, John Campbell, ed. (Univ. Chic. Press). Evidence of the effect, in turn, on real commodity prices is offered by Table 3a in Frankel & Rose (2010), “Determinants of Agricultural and Mineral Commodity Prices,” [Chapter 1](#) in *Inflation in an Era of Relative Price Shocks* (Reserve Bank of Australia: Sydney).

government would be the one to choose, either at random or from the standpoint of minimizing emergency response lags.

There are too many uncertainties to allow a good estimate of what the quantitative impact of these proposals would be.¹² A skeptic might argue that, because US reserves are a relatively small share of world reserves, the proposal would have only a modest dampening effect on world prices in the event of an oil shock. There are two counter-arguments. First, that logic applies just as strongly to the politicians' campaign to open up new fields and relax environmental and health regulation today in order to accelerate domestic supply and supposedly lower prices in the short term. Even though we can't be sure about the magnitude, we should at least get the "sign" right on the national security motive. It is important to remember that US supply and demand constitute a large share of the world market. But whatever the size of the effect that domestic production can have on domestic prices, large or small, it is better to save some of that effect for when we most need the oil rather than exhaust the effect in the short term.

Second, there are two blades in the scissors to be used to cut dependence on global oil conditions. Preserving supplies for the future is just one half of the story. The other half is reducing habits of high oil consumption. Indeed, increasing supply and lower price today would exacerbate American addiction to oil. This leads us to the price mechanism, which works on both sides of the equation, both supply and demand.

4. Reversing subsidies to depletion of US oil supplies

The second category of policies that the federal government can use to achieve energy security in the long run is the price mechanism. Appendix 1 lists the major policies that the government has used over the last century to help out powerful oil interests, often aided by a cover of national security. Subsidies to production accelerate the depletion of domestic

¹² For concreteness: holding back on developing a shale oil field the size of Bakken formation in North Dakota would be the equivalent of increasing the Strategic Petroleum Reserve by half: a drawdown capacity of about 700,000 barrels a day. Estimates of total deposits in the Bakken field are approximately 20 billion barrels. Other countries could be encouraged to go slow on the new shale oil techniques as well.

hydrocarbon deposits and thereby hurt national security. The first step is to eliminate outright subsidies to the industry. There is no good reason why oil companies should receive financial incentives to pump oil in excess of what would take place in a free market. The subsidies are especially nonsensical at a time of high budget deficits and high national debt.

The second step is to go beyond market neutrality, and tax either gasoline or unrefined oil (and other fossil fuels). Such taxes are the appropriate response to the externalities of national security, macroeconomic vulnerability, and environmental concerns. They foster conservation, both in the sense of slowing down the rate of pumping and in the sense of encouraging consumers to shift to other energy sources or reduce energy use altogether. So long as Americans consume more than 20% of the global oil supply, while holding less than 3% of the world's crude reserves, we will never be energy independent. The price mechanism is the most efficient way of reducing consumption and achieving the true path to energy security.¹³ Regulations like CAFÉ standards are a far less efficient policy lever for achieving this goal.

From the viewpoint of government finances, the revenue from oil taxes could be used in place of taxes that would otherwise discourage desirable activities, such as payroll taxes that discourage employment. In the case of a [tax on gasoline](#) or oil, the goal of enhancing long-run energy security happens to coincide with environmental goals. But one need not be concerned with the environmental goals to appreciate the security argument.

Under current macroeconomic conditions (writing in 2013), the best approach would be to pre-legislate and pre-announce a gradually rising tax rate on gasoline or oil.¹⁴ The relevant current macroeconomic conditions include an unusual combination of federal debt worries, zero nominal interest rates, low inflation, and high unemployment. These circumstances are conducive to the pre-announced path, whether viewed from the vantage of fiscal policy or monetary policy. In terms of fiscal policy, the policy would lock in [future tax](#) revenues and help

¹³ David Sandalow, *Freedom From Oil* (McGraw-Hill, 2008). Via taxes, Europe and Japan have reduced their macroeconomic vulnerability to oil shocks: the quantity consumed is smaller relative to GDP and a 50% increase in the world price raises the final price of refined products by far less than 50%

¹⁴ [Greg Mankiw](#) proposes raising the gas tax by ten cents per year (even though he was Chairman of the Council of Economic Advisers to George W. Bush and an economic advisor to Romney in the 2012 campaign. This sensible idea seems to be [supported by most economists](#).

re-establish unquestioned US creditworthiness, without withdrawing purchasing power today while the economy is still weak. In terms of monetary policy, the policy would also be a way of committing to a small increase in future inflation of finite duration; it would thereby reduce real interest rates (nominal interest rates minus expected inflation), something the Federal Reserve otherwise is finding difficult to accomplish without permanently unmooring long-term inflation.

Policy steps via the price mechanism would be complementary to steps with regard to permits and regulation. If domestic oil production were taxed rather than subsidized, some deposits would become economical only when the world price of oil went to \$200 a barrel or \$250. Thus it would act as an automatic form of the energy security trigger, kicking in if there is a serious geopolitical oil crisis, but without the need for politicians to make judgments about what constitutes a true national security emergency.

5. Shale

This time around, the goal of eliminating oil imports does not look quite as implausible as when politicians have waved around the flag of energy independence in the past. American imports of oil and natural gas have recently been declining (as a share of total consumption). One reason is the dramatic spread of the techniques of horizontal drilling and fracking (hydraulic fracturing) which make possible the recovery of shale gas and oil reserves for the first time.

This development does not necessarily disprove what the experts have been saying for years. The development and widespread use of the new technologies would not have happened had the price of oil not been above \$70 a barrel during most of the time since 2007.¹⁵ Furthermore oil consumption as a share of GDP has declined over the last four decades, aided by oil price increases in the 1970s and again over the past decade.

¹⁵ Michael Levi, "Think Again: The American Energy Boom," *Foreign Policy*, July/August 2012.

Do the newly accessible shale oil and natural gas change the calculus?¹⁶ Have they rendered the word “depletion” obsolete? Certainly technology has once again “ridden to the rescue,” offering a vision of vast hydrocarbon supplies that up-ends all the past estimates of known reserves and their forecasted depletion rates.

As just noted, however, the technologies of horizontal drilling and fracking would not have accomplished this on their own: a high oil price was a necessary component. A policy of maximizing the rate of development of these new reserves, by suspending environmental and health regulation as some want to do or by continuing fiscal subsidies, would repeat the mistakes of the past.

Although the experts say that fracking can be safe for local water supplies if done correctly, there is no reason to have confidence that it will always be done correctly. Lax regulation would increase the likelihood and severity of environmental mishaps. Mishaps would in turn lead to a public backlash that could abruptly curtail the expansion of fracking.¹⁷

In the case of natural gas, if the backlash were to come at a time when rapid growth in output had brought prices back down near the break-even point (relative to more conventional sources), the fracking boom could turn out to have been a bubble that crashes as fast as the housing bubble and so many others before it. The same could happen in oil; but the oil market is far more integrated globally than the natural gas market, so the new technologies won’t do as much to bring down the US price of oil until they too go global.

The new technologies have given the United States a second chance. Let’s not blow it this time.

¹⁶ E.g., Amy Myers Jaffe and Meghan O’Sullivan, [The Geopolitics of Natural Gas](#), Report of Scenarios Workshop of Harvard University’s Belfer Center and Rice University’s Baker Institute Energy Forum, July 2012. And Frankel, ["Fear of Fracking"](#) *Project Syndicate*, Apr.16, 2013.

¹⁷ “Executed properly, development of shale gas and oil can be done in ways that safeguard the environment and protect communities. But there are always bad apples and sloppy operators. They require not only solid regulation, which often exists at the state level, but also strong enforcement and penalties to deter and punish violators, which too often do not exist.” Levi (2012) op.cit.

6. Conclusion

The proposal to conserve offshore and shale oil deposits for an emergency would not in itself solve our energy problems. Only a long-term path of technological progress and energy conservation can do that. But a policy of gradually increasing retail prices can help achieve that path as well as slowing domestic depletion. In any case, on the margin, a barrel of offshore oil or shale oil would be more valuable under crisis conditions than it is today.

Appendix I: Policies that have been used to encourage domestic US oil production and some of their political rationales.

1. Giving private oil companies access to oil from **federal lands** at artificially low prices.

Naval reserves were established after World War I. The most famous of the sites was Teapot Dome, Wyoming. Albert Fall, Secretary of the Interior in the Harding Administration, who favored rapid development of oil supplies over conservation, in 1922 leased Teapot Dome to Sinclair on favorable terms (Yergin, pp. 195-96). This inaugurated the use of national security as a cover for corrupt crony capitalism, although it wasn't discovered until several years later that Fall had received cash pay-offs, making Teapot Dome the biggest government scandal of the decade. Years later, the federal government still often fails to get the full free-market price when giving oil firms leases to drill on federal properties.

Ronald Reagan's Message to the Congress on Energy Security in 1987: "We must take steps to better protect ourselves from potential oil supply interruptions and increase our energy and national security... I am suggesting the Congress consider two tax changes ...regarding percentage depletion allowances ... I also am reducing the minimum bid requirement for Federal offshore leases from \$150 per acre to \$25 per acre, which will encourage exploration and development by reducing the up-front costs. I believe all these measures are important steps toward ensuring that our Nation has a strong domestic oil and gas industry and substantial protection against oil supply interruptions. They would, taken together, increase production and make a significant contribution to our national security interests."

2. Oil depletion allowances 1913-1974.

This provision let oil producers deduct from their taxes a share of the value of the oil. The fiction is that depletion is a cost of business, like depreciation, but most experts view the allowance as a federal subsidy. At first, in 1913, the producers were only allowed to deduct 5 per cent and the basis was limited to the cost of the investment ("discovery depletion"). But the calculation switched to "percentage depreciation" in 1926, meaning a percentage of the value of the oil sold in a given year, due to the difficulty of knowing the value of the oil reserves at the time of initial discovery, the rate was increased to 27.5%.¹⁸ The generous oil depletion allowance stayed in effect until the Carter Administration.

3. Oil import quotas 1959-1973. See section 2 above, "Historical origins of the national security argument."

4. Other tax credits

Comments by President Richard Nixon on encouraging domestic exploration in a Special Message to the Congress on Energy Policy: "Our tax system now provides needed incentives for mineral exploration in the form of percentage depletion allowances and deductions for certain drilling expenses. ... In order to encourage increased exploration, I ask the Congress to extend the investment credit provisions of our present tax law so that a credit will be provided for all exploratory drilling for new oil and gas fields."

George H.W. Bush, from his Remarks on Signing the Natural Gas Wellhead Decontrol Act of 1989: "One important step towards protecting America from foreign energy supply interruptions is to provide more incentives for drilling right here at home.... I will continue to work to put more incentive into the Tax Code for domestic wildcat drilling. The bottom line is: A strong domestic drilling and producing business is essential to the national security of the United States of America." Another one, from Remarks on Signing the Energy Policy Act of 1992 in Maurice, Louisiana: "The act provides much needed tax relief for you, our Nation's independents, independent oil and gas producers. By far the most important change that we make as it affects the independents is to reform the alternative minimum tax to better reflect the risk, the risk that it takes to explore for oil. ... We must work to produce more of our energy here at home and import less from abroad. And our national security demands it. Future generations deserve it."

President Obama has sought to eliminate oil subsidies (which cost the federal treasury \$24 billion). But this reform is opposed by many Republicans, who use the excuse that the subsidies take the legal form of deductions from taxes, so that eliminating the provision counts as a tax increase. The Senate voted down his proposal in March 2012, by means of the filibuster (which would have required 60 votes to pass the legislation).

¹⁸ P. 26-27 of W. Leo Austin, "Percentage Depletion: Its Background and Legislative History," *University of Kansas Law Review*, 22, 1953: pp.22-30. The author defends the oil depletion allowance as essential to a national petroleum policy if this Country is not to become dependent upon another for our supply of liquid fuel."