ENERGY MARKET CONSEQUENCES
OF AN EMERGING U.S. CARBON MANAGEMENT POLICY

The History of U.S. Relations with OPEC: Lessons to Policymakers

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Prepared by the Energy Forum of the
James A. Baker III Institute for Public Policy
as part of the study
"Energy Market Consequences of an Emerging
U.S. Carbon Management Policy"

September 2010

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Acknowledgments

The Energy Forum of the James A. Baker III Institute for Public Policy would like to thank ConocoPhillips for their generous support of this research project. The Baker Institute also thanks the Institute for Energy Economics, Japan, and the sponsors of the Baker Institute Energy Forum for their generous support of this study. The Energy Forum further acknowledges contribution by study researchers and writers.

About the Study: Energy Market Consequences of an Emerging U.S. Carbon Management Policy

Emerging energy and climate policies in the United States are accelerating the pace of technological changes and prompting calls for alternative energy and stricter energy efficiency measures. These trends raise questions about the future demand for fossil fuels, such that some energy-producing nations are reluctant to invest heavily in the expansion of production capacity. The abundance of shale gas resources in North America could allow the United States to utilize more gas in its energy mix as a means of enhancing energy security and reducing CO_2 emissions. However, this will only occur if U.S. policies promote and allow the benefits provided by natural gas to be realized. To examine these issues and changing trends in the U.S. energy and climate policy, the Baker Institute organized a major study investigating the North American and global oil and natural gas market consequences of emerging U.S. policies to regulate greenhouse gas emissions, as well as the potential role of alternative energy in the U.S. economy.

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Introduction

The history of U.S.-OPEC relations has been a volatile one, ranging from intense conflict in the 1970s to marked cooperation stabilizing markets in the face of Iraq's invasion of Kuwait in the early 1990s. In recent years, U.S. rhetoric against the Organization of the Petroleum Exporting Countries (OPEC) and "foreign oil" has intensified as oil prices have experienced giant swings and the American economy has suffered as a result. This paper will look at the history and current geopolitics of the United States' policy toward OPEC and its important member states such as Saudi Arabia and Iran, as well as the ways current emerging U.S. climate and energy policy, including average automobile fuel efficiency standards, might alter oil geopolitics and supply and pricing trends in global oil markets. In analyzing how U.S. policies toward energy security and climate might impact policy choices of OPEC and important oil producing countries, the authors will shed light on the new geopolitical power politics of oil today.

Since the first oil shock of 1973-1974, every U.S. administration has sought to counter OPEC's efforts to control crude prices or use energy as a political and/or economic weapon by containing OPEC members' oil output. Some policies have been more effective than others, but none have fully countermanded OPEC's ability to hold oil prices above levels that would be seen in a free, competitive marketplace. Over the decades, U.S. policy has made a difference in the degree of OPEC's market and geopolitical power, and some U.S. administrations—most notably those of Presidents Ronald Reagan and George H.W. Bush—have successfully worked with OPEC to stabilize the global oil market in a manner that protected the global economy from large oil price shocks.

Despite the rhetoric of almost every U.S. president since Richard Nixon, the United States' dependence on OPEC oil is no less today than in 1973. During the height of the 1973 oil crisis, President Richard Nixon unveiled "Project Independence," a national energy program aimed at achieving American energy self-sufficiency by 1980. America never achieved that self-sufficiency target and indeed, by 1980, the United States was in fact suffering from a second oil shock. The United States made some headway in the early 1980s reducing the share of imported oil in the U.S. energy mix, partly by adopting more fuel efficient automobiles, but by the 1990s rising oil use would come back to haunt us. American dependence on oil imports has grown from 35 percent in 1973, when Nixon was in the White House, to about 52 percent in 2009.[1] U.S. oil imports from OPEC, as a share of total U.S. oil imports, hasn't changed all that dramatically in 35 years, with the 1973 average of U.S. imports from the group's producers totaling 47.8 percent, with Persian Gulf supplies comprising 13.6 percent. U.S. oil imports from OPEC totaled 46.1 percent in 2008 and 41 percent in 2009, with Persian Gulf barrels accounting for 18 percent in 2008 and 14.4 percent in 2009.[2]

U.S. administrations have tried diplomatically over the years to bully and cajole OPEC into cooperating on containing high crude prices, often leading to direct involvement by the sitting American president, who telephones or even visits heads of state of key OPEC member countries when diplomatic efforts involving less senior administration officials have failed. Some incoming presidents have had high expectations for the influence that they would be able to wield over OPEC either through the strength of their persuasive powers or through veiled political or economic threats. But OPEC's responsiveness to U.S. diplomacy has varied greatly over the decades. A variety of factors have influenced U.S.-OPEC relations, including geopolitical trends such as the Cold War, the Iran-Iraq war, and Iraq's invasion of Kuwait, as well as U.S. domestic energy policy trends.

In the midst of the 1973 oil embargo, President Nixon in a televised national address told the country that the United States must, in the short run, consume less energy, meaning "less heat, less electricity, less gasoline." In the long term, Nixon suggested, "…we must develop new sources of energy which will give us the capacity to meet our needs without relying on any foreign nation."[3]

The president highlighted a number of steps he was authorizing to deal with the immediate crisis brought on by the embargo, including: preventing industries and utilities who use coal to convert from coal to oil; allocating reduced fuel for the nation's aircraft; cutting energy consumption by

[1] Department of Energy, Energy Information Administration, Petroleum Trade: Overview, Table 3.3A, http://www.eia.doe.gov/emeu/mer/pdf/pages/sec3_7.pdf.
[2] Ibid.
[3] Richard Nixon, "Address to the Nation About Policies To Deal With the Energy Shortages," November 7, 1973, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=4034&st=&st1.

the federal government; reducing approximately 15 percent in the supply of heating oil for homes and offices and other establishments (the president also called on all American citizens to lower their thermostats by six degrees to achieve a national daytime average of 68 degrees); and asking the Atomic Energy Commission to speed up the licensing and construction of nuclear plants. President Nixon announced that he was calling on the nation's governors to adopt 50 miles-per-hour highway speed limits, a step he said could save some 200,000 barrels a day (b/d) in American oil consumption.

In focusing on long-range plans, the president likened the need for the United States to push ahead aggressively for energy independence with the Manhattan Project, which provided American nuclear capacity to end World War II, and the Apollo Project, which enabled American astronauts to reach the moon. In describing "Project Independence," President Nixon said, "Let us set as our national goal, in the spirit of Apollo, with the determination of the Manhattan Project, that by the end of this decade we will have developed the potential to meet our own energy needs without depending on any foreign energy sources. Let us pledge that by 1980, under Project Independence, we shall be able to meet America's energy needs from America's own energy resources."[4]

Nixon's "Project Independence" never gained traction, in part a victim of the change in administrations upon Nixon's resignation with his vice president, Gerald Ford, assuming office and the stark reality of trying to meet high expectations. In August 1974, Federal Energy Administration administrator John Sawhill opened "Project Independence" hearings by admitting that the United States would always need to import oil.

Thirty-six years later, President Barack Obama repeated the same call, in the week following his 2009 inauguration. In a direct reference to President Nixon's failed promise, Obama also called on the nation to achieve energy independence:

> "President Nixon promised to make our energy—our nation energy independent by the end of the 1970s. When he spoke, we imported about a third of our oil, and we now import more than half.

[4] Ibid.

> Year after year, decade after decade, we've chosen delay over decisive action. Rigid ideology has overruled sound science. Special interests have overshadowed common sense. Rhetoric has not led to the hard work needed to achieve results and our leaders raise their voices each time there's a spike on gas prices, only to grow quiet when the price falls at the pump.
>
> It falls on us to choose whether to risk the peril that comes with our current course or to seize the promise of energy independence. And for the sake of our security, our economy and our planet, we must have the courage and commitment to change.
> Today I'm announcing the first steps on our journey toward energy independence, as we develop new energy, set new fuel efficiency standards and address greenhouse gas emissions."[5]

The Obama rhetoric and other similar language among U.S. politicians prompted Saudi Prince Turki Al-Faisal, the former long-serving director of Saudi Intelligence and former ambassador to the United States, to write a surprisingly blunt editorial in the September/October 2009 *Foreign Policy*. The editorial took the Obama administration and the U.S. goal of achieving energy dependence to task, noting that, "The allure of demagoguery is strong, but U.S. politicians must muster the courage to scrap the fable of energy independence once and for all." Calling the concept of energy independence "unrealistic, misguided, and ultimately harmful to energy-producing and –consuming countries, alike," Prince Turki argued that there is no technology in the foreseeable future that can completely replace oil. He noted that U.S. energy needs will have to be met with a mix of both renewable and fossil fuels. For that reason, the prince suggests that the Obama administration should focus on "energy interdependence" rather than energy independence, as "the fates of the United States and Saudi Arabia are connected and will remain so for decades to come."[6]

Prince Turki suggested that the term "energy independence" commonly used by the United States is often used "as little more than a code for arguing that the United States has a dangerous reliance on my country of Saudi Arabia, which gets blamed for everything from global terrorism to high gasoline prices."[7]

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[5] "Obama Announces Plans to Achieve Energy Independence," *Washington Post* (transcript), January 26, 2009, http://www.washingtonpost.com/wp-dyn/content/article/2009/01/26/AR2009012601147_pf.html.
[6] Prince Turki Al-Faisal, "Don't Be Crude," *Foreign Policy*, Sept./Oct. 2009, http://www.foreignpolicy.com/articles/2009/08/17/dont_be_crude?page=0,0.
[7] Ibid.

Highlighting Saudi Arabia's role for the last three decades of working to ensure the stability of the world's energy supply, Prince Turki stressed in his *Foreign Policy* editorial that the kingdom has invested more than $100 billion to expand its sustained production capacity to 12.5 million b/d—enabling Saudi Arabia to accommodate the loss of the second- and third-largest OPEC producers overnight, if need be.[8]

Plans for a first tranche of $14 billion in Saudi oil investments by 2009 were aimed to achieve this rate of sustainable production by now. However, this goal could only be accomplished if national oil company Saudi Aramco were successful in stemming the natural decline in its aging fields to two percent per annum. This has been hard to accomplish and the kingdom's sustainable production capacity is not believed to be much above 11 million b/d.[9] One major project that was supposed to replace declining production from mature fields was new production from the offshore Manifa field. The development of the Manifa field, which is supposed to reach 900,000 b/d in the coming years, is said to be at least two years delayed, making it harder for the kingdom to reach its sustainable oil production goals. Manifa is unlikely to reach more than 450,000 b/d by 2013, and achieve its target level only in 2015.

Future investments are expected to be more expensive, as the kingdom has completed expansion of projects involving less complex reservoirs and now must tackle more challenging geologic areas with less porous rock. With trickier reservoirs in existing fields now needing to be tapped, Saudi Aramco expects its costs to go up. Aspirations to expand exploration to new areas such as the deepwater Red Sea will be technically difficult for Saudi Aramco.

By his second year in office, President Obama tempered his focus on energy independence, noting that the move from fossil fuels to clean energy will require time and be costly. Still, the president noted: "…we can't afford not to change how we produce and use energy—because the long-term costs to our economy, our national security, and our environment are far greater."[10]

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[8] Ibid.
[9] Authors interviews with regional officials.
[10] "Obama's Gulf Spill Speech," *Huffington Post*, transcript, June 15, 2010, http://www.huffingtonpost.com/2010/06/15/obamas-gulf-spill-speech_n_613554.html.

Indeed, the costs of trying to eliminate oil imports in the short run would be incredibly expensive. U.S. oil imports of roughly 11 million b/d are the equivalent of 18.7 terawatt hours of energy. To replace all of this imported oil with non-fossil energy sources would be the equivalent of adding almost eight times the current U.S. total capacity for nuclear power generation (assuming 24-hour, 100 percent operations). The United States currently operates 103 nuclear plants. There are also more than 250 million oil fuel-based motor vehicles in the United States. On average, Americans retire 75 percent of motor vehicles over a seven-year period. Thus, the infrastructure demands alone in shifting the equivalent of 18.7 terawatt hours of oil based energy use are immense, both in terms of scale and timeline for retiring existing motor vehicle and energy production facility stocks.

U.S. President Barack Obama and OPEC

OPEC members may have applauded the election of Barack Obama to the U.S. presidency much like the majority of the international community did in November 2008, but the group made it evident early on that OPEC doesn't see eye-to-eye with President Obama on the energy platform that he espoused during the American presidential campaign—including a commitment to once and for all eliminate American dependence on foreign oil.

Given the scale up and timing issues, as reflected in Prince Turki's op ed, leaders from OPEC oil producing countries remain skeptical of the Obama administration's push for renewable energy development, electric cars, and the administration's initially ambitious commitment to slash U.S. greenhouse gas (GHG) emissions and support a global climate treaty. OPEC's best defense against alternative energy would be to drop the price of oil to levels that would render alternative energy as commercially unprofitable. But the producer group is not currently actively concerned about the threat of alternative energy or electrification of the transportation sector because it doesn't believe that such technologies can be scaled up commercially to a significant level within the next twenty or thirty years. OPEC leaders are more concerned that a U.S. or global climate regime not tax or penalizes petroleum in a substantial fashion that significantly disadvantages oil-based fuel. A U.S. border carbon tax that hits all U.S. imports, including oil imports from

Saudi Arabia, might be viewed as a more serious trade problem than U.S. policies to promote alternative energy.

But so far, OPEC has not had to worry too much about the Obama administration moving ahead forcefully with overly ambitious energy and climate policy plans. Instead, the new administration has been hamstrung with a struggling U.S. economy. The administration's long struggle to pass major health care reform between 2009 and the spring of 2010 has dampened its chances of passing substantial climate legislation either later this year or into next year, and President Obama has also had to cope with the fallout from the weak accord produced from the December 2009 U.N. climate talks held in Copenhagen. Thus, OPEC's charge has been mainly focused on reacting to prospects that tightened fuel economy standards will curb growth in oil use in the U.S. market over time.

Less than two months after the U.S. presidential inauguration, OPEC signaled goodwill toward President Obama when the group convened in Vienna in March 2009 to assess market conditions and steered clear of approving new supply reductions. OPEC seemed reluctant to send the Obama administration a negative signal at such an early stage. And, the group gave strong consideration to the impact that a cut in output would have on a struggling global economy. Key OPEC leaders were also cautious that the organization's deliberations not appear to undermine a critical G-20 heads of state summit the following month.

Proactively, President Obama called Saudi King Abdullah Bin Abdul-Aziz on March 13, two days before the OPEC conference, to stress the need for a coordinated response to the global economic crisis. Reflecting a desire to keep things on a positive footing, OPEC officials even uncharacteristically praised the new U.S. president. In unusual comments, OPEC Secretary General Abdullah El-Badri told reporters at the conference that, "I don't want to say I voted for Obama, but we can see a different tone … that we didn't see in the past." He added, "We have seen a positive approach. They are ready for dialogue and we are ready for dialogue and ready for talk."[11]

[11] Barbara Lewis, "OPEC bows to weak economy, Obama effect," *Reuters*, March 16, 2009, http://www.reuters.com/article/newsOne/idUSTRE52F1FD20090316.

Behind the scenes of OPEC's internal politics is Saudi Arabia's ascending position in the G-20. The kingdom takes this important global G-20 role very seriously and does not want to open itself to criticism for taking any actions at OPEC that would destabilize the global economic recovery. The kingdom certainly wants to avoid any blame that its actions could damage the global economic recovery. Moreover, the recovery is in the kingdom's interests since only with a strong economic recovery will the growth path for oil demand recover. To enhance its position in this top boy's club of international financial leadership, the kingdom and its regional Gulf Cooperation Council (GCC) allies worked to keep oil prices low, at around $40 a barrel in the second half of 2008, in hopes to protect the global economy from further damage. Saudi Arabia's world leadership bona fides were enhanced by its policies aimed to support economic recovery, including its loans to the International Monetary Fund and its advocacy of moderate oil prices.

When President Obama made a brief visit to Riyadh on June 3, 2009, to meet with King Abdullah, both the American and Saudi camps had already strongly stated their views on oil prices and market conditions, demonstrating the ongoing difference of perception between consumer and producer. "It was not in the interest of Saudi Arabia to have huge spikes in oil prices," the U.S. president said prior to his departure, adding, "It doesn't serve either country to have economies constantly disrupted by huge spikes in energy prices." On the Saudi side, the Saudi cabinet had declared that OPEC's decision not to cut or increase production would not have a negative impact on the global economy. The Saudi monarch, in an interview with the Kuwaiti newspaper, *Assiyassa*, had expressed confidence about the market improving, implying that higher prices than $50 a barrel were justified. "We are currently seeing a fast recovery for the global economy and there are indications of a higher demand for oil," King Abdullah told the Kuwaiti publication. And, Saudi Oil Minister Ali Naimi, also put a positive spin on the recovery in the oil market. He said that "The global economy has strengthened enough to cope with oil at $75-80 a barrel and that level will be hit soon as fuel demand picks up."[12]

Indeed, Saudi Arabia has made a commitment, pronounced at the G-20 summit, to implement a price ceiling of $75 to $80 a barrel (bbl) to prevent oil price volatility from harming the global

[12] Syed Rashid Husain, "Fair price issue continues to haunt Obama even after Riyadh visit," *Arab News*, June 12, 2009, http://www.arabnews.com/?page=6&section=0&article=123540.

economic recovery. A $70 to $75/bbl oil price is also seen as one that will be high enough to encourage development of unconventional resources needed to balance the market in the future. The U.S. administration is said to favor this higher price band as well, as it is in line with President Obama's desire to develop alternative and renewable energy sources which would have more difficulty competing under low oil price scenarios. PFC Energy Market Intelligence Service noted in its recent August 24 briefing on OPEC:

> "Although economic fears are mounting, there is little if any perception (inside OPEC) that the dangers to the economy are arising from high energy prices: instead, lack of aggregate demand is the primary concern. Furthermore, even U.S. administration officials have publicly—if tacitly—given support to the Fair Price ($75/bbl) by noting its role in supporting investment in both conventional and renewable energy sources. Moves (i.e, OPEC cuts at the upcoming October 2010 meeting) perceived to engineer support for prices in a $65-$75/bbl would likely not be met by howls of protest from the consuming countries."[13]

Evidence of this policy has been confirmed in public statements. At the end of March 2009, David Goldwyn, U.S. Department of State coordinator for international energy affairs, for example, said: "The price range we are in is positive for encouraging diversity of supply … it's high enough to support energy-efficiency measures that are positive for mitigating climate change."[14] The administration also announced that the U.S. Commodities Futures Trading Commission (CFTC) would reevaluate the rules for position limits in the U.S. oil futures markets in the first substantive signal from the Obama administration that it is worried about the short-term impact of a return to runaway oil prices. The CFTC announcement came in the wake of a run-up in prices to $80/bbl.

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[13] ""OPEC: Conditions Coming for a Cut," *PFC Energy Market Intelligence Service*, August 24, 2010.
[14] Clifford Krause, "Oil Prices Find a Sweet Spot for World Economy," *The New York Times*, March 30, 2010, http://www.nytimes.com/2010/03/31/business/energy-environment/31oil.html.

Saudi price intentions are dominant, as the kingdom's leadership position inside OPEC appears to be uncontested at present.[15] While geopolitical divisions within OPEC still exist between the Gulf Arab countries who have been seeking more moderate prices and Iran and Venezuela, who need a price of $90 to $100/bbl to manage their flagging economies, the deep schisms over optimum price levels that used to plague OPEC in the past are no longer a driving force. Strategic disagreements remain but the internal politics of the organization are eased by the fact that overall higher prices and higher revenue have glossed over concerns about market share, overall strategy leadership and distribution, and compliance of quota cuts. Still, two points of tension linger inside the cartel. Iraq's new upstream licensing rounds, and its announcement that it intends to raise its production to 10 million b/d over the next decade, pose new long-term challenges for OPEC. Iraq has declared that it won't accept production quota restrictions until its output reaches 6 million b/d. So far, the Iraqi posture has not created a problem inside OPEC because other members believe Baghdad is years away from achieving its goals. But longer term, Iraq's expansion plans could put it in conflict with Saudi Arabia, whose policy is to maintain its preeminent position as the oil superpower.

A more immediate problem inside OPEC is the deterioration in relations between Iran and its Gulf Arab neighbors over its nuclear aspirations. This deterioration in relations could eventually lead to policies that will destabilize oil markets, especially if military solutions are pursued. The Gulf Arab members of OPEC are likely to prepare for war in much the way they have done in the past by putting extra oil into the market ahead of conflict to ensure that an oil crisis does not ensue from any heightened conflict with Iran. But it would likely take strong cooperation between the United States and OPEC to manage the impact of military action in the region on global oil markets.

Over the period of the summer and fall of 2009, Saudi Oil Minister Naimi reiterated that a $75/bbl oil price was "fair." During a September 25 interview with PBS' *Nightly Business Report*, Naimi stated that producers needed an oil price that would allow supplies to be developed to meet demand. "We believe that around $75 is a fair price for both producer and

[15] PFC Energy Market Intelligence Service notes that "That Saudi Arabia can balance its current account with prices near $55/b barrel –and with accumulated financial reserves, could support deficits brought about by prices as low as $35/b for a substantial period – underscore the Kingdom's real source of influence in these (OPEC) deliberations."

consumer, Naimi said. "At $60 and $70, you see a bigger movement in investment, you see more supply of energy," the Saudi oil official added.[16]

Speaking to reporters at the September 9, 2009, OPEC conference, Naimi—in referring to the then oil price of just below $71 a barrel—commented, "We are happy where it is and it's going to be there for a while. We don't have the slightest worry." Qatari Energy Minister Abdulla Al-Attiyah concurred with his Saudi colleague, saying that, "At $70 or $80 a barrel, this is the right price for all consumers and producers. I believe this price will help strengthen the world economy. It will help."[17] When asked on December 7, 2009, about what he thought about the then current oil price of roughly $75 a barrel, Naimi was quoted as saying that, "The price is perfect."[18]

While OPEC, led by Saudi Arabia, looks like it will continue to champion a $65-80 bbl oil price range as the ideal level for the foreseeable future, aggressive U.S. climate policies, such as cap and trade legislation, might be viewed down the road by OPEC as a rising energy tax that needs to be countered by less conciliatory OPEC policies. Still, OPEC's best defense against alternative energy is to drop the price of oil to levels that would render alternative energy as commercially unprofitable. The producer group is not currently actively concerned about the threat of alternative energy because it doesn't believe that any of the technologies for renewable energy can be scaled up commercially to a significant level within the next 20 years. Thus, the question of OPEC response will be related to the effectiveness of any U.S. or global climate regime and whether it taxes or penalizes oil in a substantial fashion that significantly disadvantages oil-based fuel. A U.S. border carbon tax that hits all U.S. imports, including oil imports from Saudi Arabia, might be viewed as a more serious trade problem than U.S. policies to promote alternative energy.

[16] "Saudi Arabia sees $75 as sustainable price for oil," *Reuters*, September 26, 2009, http://www.gulfnews.com/BUSINESS/Oil_and_Gas/10352548.html.
[17] Jad Mouawad, "For OPEC, Current Oil Price Just Right," *The New York Times*, September 9, 2009, http://www.nytimes.com/2009/09/10/business/energy-environment/10opec.html.
[18] "Saudi Oil Minister: $75 Oil Is Perfect," *Associated Press*, December 7, 2009, http://moneynews.com/StreetTalk/Saudi-Oil-Minister-75/2009/12/09/id/338455.

OPEC members do not currently deem U.S. alternative energy programs as a serious threat[19] and, therefore, the producer cartel has not fashioned any organized group response. However, individual OPEC members, especially the GCC exporters, are aware of the potential impact that tightened U.S. automobile efficiency standards and other carbon management-related policies might have on shrinking U.S. oil demand over time and are fashioning commercial responses to this new reality.

While rifts over climate policy do not yet appear to be impacting U.S.-OPEC relations, the issue is one that looms in the background. Speaking on the same day that the OPEC ministers decided to hold off on production cuts in March 2009, U.S. Energy Secretary Steven Chu lauded the group for not making further output reductions, but also said, "… I continue to believe that we should stay focused on what our country can do to become energy independent—ending our dependence on foreign oil and investing in new clean energy sources that will put Americans to work and address the global climate crisis."[20]

Naimi, speaking at a G-8 energy summit in May 2009, warned that while the kingdom was "maintaining our long-term focus rather than being swayed by the volatility of short-term conditions … if others do not begin to invest similarly in new capacity expansion projects, we could see within two to three years another price spike similar to or worse than what we witnessed in 2008." The Saudi oil official described the investment environment as bleak, pointing to low prices, weak demand, high costs, tight credit markets and energy policies in the West promoting alternative energy sources as having a negative impact on needed investment.[21]

The Obama administration appeared to turn its radar toward energy issues in early 2010 and the shifting nature of U.S. energy policy is prompting changes in Saudi oil strategy. The president, as recently as early February, stressed how his administration believed that climate change and energy issues needed to be tackled in tandem. Speaking at a meeting with governors on energy policy at the White House on February 3, President Obama stated that "my administration is

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[19] Authors interviews with OPEC ministers.
[20] U.S. Department of Energy, "As OPEC Ministers Meet, Secretary Chu Stresses the Importance of Energy Independence," news release, March 15, 2009, http://www.energy.gov/news/7053.htm.
[21] Rania El Gamel and Svetlana Kovalyova, "Oil Could Soar to US$150, OPEC warns," *Reuters*, May 26, 2009, http://www.nationalpost.com/todays-paper/story.html?id=1629726.

following a non-ideological approach" to reducing America's dependence on foreign oil while pursuing a clean energy agenda that produces jobs domestically.[22]

In stressing a "strategy of more production, more efficiency, and more incentives for clean energy," the president stated the need to develop clean coal technology. It probably was no coincidence that President Obama emphasized that "the United States is the Saudi Arabia of coal," a not-so-subtle reminder of how dependent the United States is on Saudi and other Persian Gulf oil. He went on to say that he was announcing a "Carbon Capture and Storage Task Force," charged with determining how to utilize affordable clean coal technology on a wide scale within 10 years. The president noted that his administration wanted 10 commercial demonstration plants in operation by 2016. President Obama also pointed out that, "By 2022, we will more than double the amount of biofuels we produce to 36 billion gallons, which will decrease our dependence on foreign oil by hundreds of millions of barrels per year."[23]

The administration is also announcing billions of dollars of loan guarantees for nuclear power in an effort to make more progress on a bipartisan energy agenda. President Obama mentioned nuclear power specifically in his January 27, 2010, State of the Union address. Secretary Chu told a recent Senate energy committee session that the federal government will need to provide additional funding beyond the $18.5 billion in loan guarantees passed by Congress in the 2005 Energy Bill to give confidence to industry that new plants can be built on time and on budget.

More than $80 billion from the $787 billion American Recovery and Reinvestment Act of 2009 has been invested in "clean" energy technology, which the Obama administration touts as "the largest single investment in clean energy in U.S. history." The administration says that investment will produce $150 billion in clean energy projects.[24]

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[22] "Remarks by the President and the Vice President at Meeting with Governors on Energy Policy," released by the Office of the White House Press Secretary, February 3, 2010, http://www.whitehouse.gov/the-press-office/remarks-president-and-vice-president-meeting-with-governors-energy-policy.
[23] Ibid.
[24] Karen Travers, "Biden Updates Obama on Recovery Act Investments in Clean Energy Projects," *ABC News*, December 15, 2009, http://blogs.abcnews.com/politicalpunch/2009/12/biden-updates-obama-on-recovery-act-investments-in-clean-energy-projects.html.

The proposed 2011 budget acknowledges renewable energy, with wind power, in particular, seeing an increase in allocations. But the allocations are probably too small to make substantial differences. The budget allotment for wind power swelled 53 percent, from $80 million this year to $123 million for next year. The Obama administration also sought to increase funding for solar power by 22 percent, from $247 million to $302 million. By contrast, the administration wants to eliminate all funding for research into natural gas technologies, an item that had accounted for $18 million of spending in the current fiscal year.[25]

While OPEC says privately it is not worried about the shift in U.S. policy, Obama's strong energy independence rhetoric used in touting his energy plans since coming into office has not been well received by many within OPEC.

Individually, key OPEC members have reacted to the prospects of a new, more proactive U.S. policy by shifting actively to find alternative outlets for their oil and natural gas, especially in Asia. Such marketing changes are being seen in Saudi Arabia, the United Arab Emirates, Kuwait, and Qatar.

The trend for Saudi Arabia to shift its marketing focus away from the U.S. market, where its export sales have been declining, and more toward Asia, which is seen as a growing market, dates back to the administration of President George W. Bush. The change reflects commercial and geopolitical factors, but has gained momentum during the Obama administration. One reason is certainly pessimism about oil demand trends in the United States as new energy policies, including the new corporate average efficiency standards and potential promotion of electric cars, come into practice (see Medlock/Hartley scenarios) to constrain oil demand. There is also a belief that future oil demand increases are most likely to come from the emerging economies of China and India. But there are a variety of other factors at play as well, including geopolitical motivations. These include, among other issues, the desire to constrain Iran's market opportunities which would put additional pressure on the Iranian regime's expansionist policies and nuclear aspirations.

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[25] Mike Soraghan and Katherine Ling, "Chu faces bipartisan heat on proposed oil and gas cuts," *E&E Publishing*, February 4, 2010, http://www.eenews.net/.

There is no question that the shift to Asia is said to be purposeful and part of a long-term shift in Saudi marketing priorities. As President George W. Bush began Operation Iraqi Freedom on March 19, 2003, the kingdom publicly distanced itself from the U.S.-led initiative, but its oil policy was supportive, with the kingdom increasing its sales both to the United States and elsewhere in early 2003 as the kingdom sought to stabilize markets ahead of the war and cope with other supply disruptions. Thus, initially, Bush received high cooperation from Saudi Arabia and through its leadership, OPEC. In the first half of 2003, Saudi crude oil shipments to the United States were very high as the kingdom moved to replace lost supplies resulting from civil unrest in Nigeria and cutbacks in Iraqi oil production due to the onset of Operation Iraqi Freedom. Reaching a record of 1.87 million b/d to the United States, Saudi Arabia continued to rank as the No. 1 supplier with over 20.1 percent of the U.S. market share.

However, the policy of supporting the U.S.—albeit quietly—was costly to the Saudi regime during the G.W. Bush years. Later in 2003, Saudi Arabia began to reevaluate its commercial strategies in light of changing geopolitical issues. Saudi crude oil exports to the United States began to fall and, by the first four months of 2004, accounted for only 13.9 percent of the U.S. import market with Saudi Arabia falling from the top U.S. supplier to the third-largest supplier. While Saudi Aramco President and CEO Abdallah Jum'ah made it clear at the time that oil exports to the U.S. would continue to be important to the company and without a doubt that "the U.S. needs us, and we need the U.S," Saudi Aramco began increased efforts to court both Indian and Chinese oil companies to maximize oil revenues.[26] That trend has accelerated during the Obama administration, with Saudi exports to China overtaking volumes to the United States in the last three months of 2009 and into early February 2010.[27]

On the one hand, the long trend in Saudi oil marketing policy does indeed reflect a response to new emerging U.S. energy policies designed to restrain growth in long-term American oil demand. Saudi Arabia believes that the U.S. market will shrink over time and is responding to this trend by altering its commercial strategies, according to author interviews with Saudi officials. Already, Saudi Aramco has lost much of its U.S. East Coast sales base, leading it to

[26] Simon Romero and Jad Mouawad, "Saudis in Strategy to Export More Oil to India and China," *The New York Times*, February 18, 2005.
[27] Data from Energy Intelligence Group and U.S. Energy Information Administration.

relinquish its Caribbean storage that was used to service that business. Saudi Arabia's decision to let go of Caribbean storage is not seen as part of the move toward Asia. Rather, it reflects commercial considerations as U.S. East Coast sales have been cancelled by customers in recent years with the closure of the Delaware City refinery and the paring back of Sunoco's asphalt business, as well as lower purchases by other U.S. refiners.

Another recent key goal for Saudi Arabia has been to improve the kingdom's balance of downstream integration. The kingdom has a publicly announced a goal of doubling its refining capacity to 6 million b/d within five years. One key aspect of the kingdom's downstream expansion has been to add more heavy crude refining capacity to enhance Saudi Arabia's ability to influence global crude oil prices and market supply at any time—and under any contingency—by rendering all of the kingdom's spare capacity of heavy oil production instantaneously marketable. In the mid to late 2000s, Saudi Aramco had trouble disposing of its heavy crude when it moved to increase production to temper oil prices. By channeling more heavy crude into its own system, Saudi Aramco hopes to both solve that problem and to garner higher returns for itself from its heavy crude stream by being the party to benefit from upgrading capacity.

As new refineries come on line inside the kingdom, U.S. customers are expected to experience additional cutbacks in access to Saudi heavy crude. This could prove problematic for U.S. Gulf Coast refiners with deep conversion facilities because it coincides with a decline in production in Venezuela and Mexico, two other heavy oil suppliers. Venezuela has also been selling additional cargoes to India and China. U.S refiners are going to have to increasingly rely on Canadian crude to meet future demand. U.S. imports of Saudi crude oil have been running at around 1 million b/d so far this year and are expected to drop to under 800,000 b/d in coming years as Saudi Aramco shifts its sales priorities.[28]

But the recent momentum this past spring for Saudi Arabia, Kuwait, and the United Arab Emirates to seek higher oil sales to Asia also has some geopolitical overtones. The three U.S. allies have been working in close coordination with the Obama administration to wean China and

[28] Author's interviews with Saudi Aramco officials.

India away from high dependence on Iranian crude in hopes of lessening Beijing's support for the Iranian regime and its pursuit of a nuclear program.[29] The initial result of the effort was dramatic, with Iran reporting in April 2010 as many as 25 cargoes of unsold oil—totaling 48 million barrels or the equivalent of 19 days worth of Iranian crude oil exports—floating adrift at sea, unable to find a buyer.[30] Iran is expected to have marketing problems again this autumn as internal demand falls in the Middle East for seasonal reasons and Russia increases its exports to Asia through a new pipeline coming on line.

Earlier this year, Saudi Aramco came to an agreement with Japan to create strategic crude oil storage there to facilitate increased sales and to prove its commitment to Asian customers by reducing transport costs and demonstrating greater security of supply. This effectively provides Asian buyers with a working capital discount. Other Middle East sellers have also lowered prices to knock Iranian crude oil sales out of the Asian market. As a result, the so-called "Asian premium"—the higher price Asian buyers have typically paid for Middle East oil compared to U.S. and European customers—disappeared. According to *Petroleum Intelligence Weekly*, "term sales (exports under long-term contracts) of Saudi Arabian Light crude to Asian customers were fetching over $3 per barrel more than sales to Atlantic Basin buyers in late 2009, but that has now flipped to a discount for Asian sales of as much as $6/bbl."[31] *PIW* cites the global recession and "ample physical supplies" as key factors driving down prices in Asia and notes that Saudi Arabia is pushing extra volume to the Asian market, and that countries like Kuwait were moving

[29] Authors interviews with Middle East leaders and senior U.S. government officials.
[30] Edward Morse, "Pincher Movement: Global Squeeze on Iran Yields Growing Floating Stocks," *Credit Suisse Fixed Income Research*, April 19, 2010. Notes the report, "The not-so-hidden hand of outside pressure is more apparent in India, especially on India's Reliance Industries Ltd., with its huge refining capacity of over 1-m b/d and its recent imports of 100-k b/d of crude oil from Iran. But there are credible press reports that Reliance has shut off exports of gasoline as well as imports of crude from Iran. It also appears that Reliance has replaced that lost crude oil supply with Saudi crude oil. While there have been press reports that both Delhi and Indian companies, including Reliance, have been under pressure from the US to reduce transactions with Iran, it is also clear to us that it is in Reliance's self interest to do so. India's largest industrial firm has long been seeking upstream and downstream assets in the US. It recently appears to have called off discussions to purchase Lyondell's refining and petrochemical facilities but it has also successfully purchased an opportunity in the US shale gas play ($1.7 billion for a joint venture with Atlas Energy to develop the US firm's Marcellus shale gas operations). Operating a company in the US would automatically put Reliance under the jurisdiction of US laws and regulation banning financial transactions with Iran."
[31] "PIW Scorecard: Asian Premium vanishes," *Petroleum Intelligence Weekly*, April 26, 2010.

in parallel to reduce prices to Asian buyers.[32] Russia is also about to launch new sales to Asia via its new East Siberia-Pacific Ocean (ESPO) pipeline, potentially exasperating the trend.

Beyond concerns related to geopolitical factors such as Iran, and the possibility that the U.S. market will underperform compared to China and India, OPEC's members who are also in the Gulf Cooperation Council are also closely watching the development of massive shale gas resources in the United States and studying the effect that rising supplies of natural gas might have on the oil/natural gas market balance. As prices for natural gas in the United States fall, the prospects that global natural gas prices will become similarly discounted is raising concerns in the Gulf about the long-term implications of U.S. shale gas abundance. Mideast exporters are worried about the possibility that cheap natural gas will eat away at oil demand in the electricity and industrial sectors in developing economies of Asia at the same time that those countries are trying to shift to alternative energy at the margins.

Climate Issues

Less than a week after his inauguration, President Obama reversed one of President George W. Bush's domestic energy initiatives by directing the Environmental Protection Agency (EPA) to review waivers to California and 13 other states, allowing them to establish their own emissions standards. The Bush administration had rejected waivers requested by the states, arguing its existing federal guidelines that gradually increased fuel economy standards were adequate. President Obama's change in this policy could lead to an eventual tougher mile-per gallon standard for most automobiles, which would certainly be a factor in further reducing U.S. oil demand.[33]

The Obama administration flexed its muscles on the climate issue through an announcement that the EPA plans to regulate GHGs from industrial smokestacks—including refineries, power plants and factories—via the Clean Air Act. The EPA announcement proposed regulating GHGs from any industrial plant that emits at least 25,000 tons of greenhouse gases a year. Commentators say that the administration had hoped the announcement would spur the U.S. Congress to pass

[32] Ibid.
[33] Sam Hopkins, "Oil Price Outlook 2009:Obama's Efficiency Push Could Destroy More Demand," *Wealth Daily*, January 26, 2009, http://www.wealthdaily.com/articles/oil-price-outlook+2009/1667.

climate legislation to obviate the need for new EPA federal rules, which would certainly be challenged in court.

OPEC members made their disapproval of a U.S.-backed U.N. climate treaty well known during U.N. climate talks attended by 175 nations in Bonn, Germany, on March 30, 2009. The U.S. envoy for climate change, Todd Stern, earned high marks from the attendees by saying that Washington was strongly committed to a new climate treaty and that the United States had a "unique responsibility" as the top emitter since the Industrial Revolution.[34]

Delegates from the OPEC states at the Bonn session argued that a new climate treaty would harm oil-exporting economies because of a turn from fossil fuels toward renewable energy sources. According to Ramiro Ramirez of the OPEC Secretariat, "The shift to a low carbon economy has a clear and deliberate outcome that will adversely impact all developing country fossil fuel exporters." Ramirez noted that industrialized nations were pressing OPEC members to expand exploration and production to help jump-start the global economy at the same time they were making moves away from oil.[35]

Still, despite concerns voiced by OPEC at Copenhagen, the cartel looked favorably on U.S. reluctance to embrace the idea of a global carbon tax that is being pushed by some European nations. A multilateral carbon tax could reduce hydrocarbons demand in the long term and stimulate a switchover to low-carbon alternatives such as nuclear power, wind, solar, and biofuels. Europe has moved alone in the absence of a global carbon tax agreement, imposing large increases in fuel taxes and establishing a system of caps and carbon credit trading to control industry emissions. In a surprisingly unique argument against carbon taxes and policies that seek to reduce GHG, Saudi Arabia has insisted that oil exporters should be granted access to funds for "victims" of global warming to compensate for hardships to oil exporters caused by climate change policies. The Saudis and other oil exporters claim that the real future energy risks do not

[34] Alistair Doyle, "China hails U.S. climate pledges, OPEC fears for oil," *Reuters*, March 30, 2009, http://www.reuters.com/article/latestCrisis/idUSLU140069.
[35] Ibid.

come from a scarcity of supply but the destruction of demand that will be caused by public policy in consuming nations.[36]

Although the Obama administration initially had high expectations for a far-reaching accord to come out of the U.N. global climate talks held in Copenhagen in December 2009, it was evident going into the gathering involving 193 nations that it was going to be tough to reach consensus on a host of issues, let alone adopt new deadlines for reaching GHG emissions acceptable to all. Indeed, after two weeks of delays and spirited debate, the Copenhagen climate talks concluded with a nonbinding agreement to start taking action on global warming, based on a pact formed by five major nations. The deal was a political agreement cobbled together by major emitting nations to curb GHG, to help developing nations build clean energy economies, and to provide financial resources to countries vulnerable to the effects and costs of climate change. Many of the nations attending the conference, while grudgingly endorsing the pact, decried the absence of firm targets for mid- or long-term reductions of GHG emissions and a deadline for concluding a binding treaty in 2010.

Notably, OPEC members Saudi Arabia and Venezuela were among a small number of countries that refused to accept the final document.[37] Speaking to reporters on the sidelines of the International Oil Summit in Paris in early April 2009, OPEC Secretary General El-Badri suggested that "Oil is not responsible" for climate change, but that, "It is the industrialized nations which are making all this pollution in the world." The OPEC official went on to state that the high oil product taxes imposed by some industrialized countries, including most western European nations, should be directed to environmental projects.[38]

In June 2009, the U.S. House of Representatives narrowly passed the American Clean Energy and Security Act, designed to reduce U.S. GHG emissions by 17 percent by 2020 and 83 percent

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[36] Tom Ashby, "Carbon tax could blunt Gulf nations' competitive edge," *The National*, April 24, 2009, http://www.thenational.ae/apps/pbcs.dll/article?AID=/20090420/BUSINESS/704209936.
[37] Andrew C. Revkin and John M. Broder, "A Grudging Accord in Climate Talks,"*New York Times*, December 19, 2009, http://www.nytimes.com/2009/12/20/science/earth/20accord.html?pagewanted=1&sq=Copenhagen,%20climate%20talks&st=cse&scp=29.
[38] Tom Bergin, "OPEC says oil not to blame for climate control," *Reuters*, April 2, 2009, http://www.reuters.com/article/marketsNews/idUSL225721020090402.

by 2050, to diminish U.S. dependence on imported oil, and to establish a cap-and-trade system for carbon emissions permits similar to that already in effect in Europe. The cap-and-trade system would essentially require industries to cap their emissions output or pay a fee to emit more than the allotted amount, which opponents suggest is nothing more than an energy tax. The bill would also include regulations that American utilities produce 15 percent of their electricity from renewable resources by 2020.[39] However, the bill faces heavy opposition in the Senate, and Congressional sources believe it will now be virtually impossible for the administration to pass a cap-and-trade system bill ahead of U.S. Congressional midterm elections. Some Democrats are suggesting the legislature shift priorities to a more limited, energy policy-focused bill. The Obama administration appears to be pursuing those policies it can do through the budget and by executive order first. Obama administration sources say it will take a strong bipartisan effort to pass a climate bill, and this could prove difficult in today's political environment in the United States.

OPEC and the United States: Lessons from History

President Richard Nixon came to office in his abbreviated second term failing to recognize the problem that energy issues would create for the success of his administration.[40] Even before the Arab boycott in 1973, energy issues—including shortages and pricing—were at the top of the U.S. political agenda. During Nixon's first term, shortages began to worsen as a "powerful environmental movement emerged to exacerbate the problem."[41] A major oil spill in the Santa Barbara channel in southern California forced the administration to halt all oil activities there and impeded exploration in the Outer Continental shelf; construction of new power stations and oil refineries were blocked; and new auto emission standards reduced fuel efficiency.

In June 1971, President Richard Nixon delivered the first-ever executive energy message to the U.S. Congress, warning that, while the United States had been able to double its energy consumption during the previous two decades without exhausting the supply, "…the assumption

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[39] Penny Star, "US clean-air bill to alter energy use,"*The National*, June 27, 2009, http://www.thenational.ae/apps/pbcs.dll/article?AID=/20090627/BUSINESS/706279962.
[40] Allen J. Matusow, *Nixon's Economy: Booms, Busts, Dollars & Votes* (Lawrence, Kansas: University Press of Kansas, 1998) 241.
[41] Ibid, 244.

that sufficient energy will always be readily available has been brought sharply into question within the last year." In his energy address, the president named three goals that government and industry needed to pursue in clean energy research and development: developing sulfur oxide control technology to stem the discharge of sulfur that results from burning coal and oil; expediting the development of the liquid metal fast nuclear breeder reactor program under the aegis of the U.S. Atomic Energy Commission; and pursuing coal gasification technology. Nixon declared that the best hope for meeting the nation's growing demand for economical clean energy was through the fast breeder reactor, citing its highly efficient use of nuclear fuel. His desire was to see the commercial demonstration of a breeder reactor to be completed by 1980.[42]

In addition to these top priorities, the president highlighted other research and development projects then in the works, including: controlled thermonuclear fusion research; coal liquefaction; underground electric transmission; and solar energy. Indeed, President Nixon is believed to be the first U.S. president to make mention of solar energy as an alternative to fossil-fuel energy resources.[43]

In 1973, the fifth year of Nixon's presidency, the United States was facing a severe energy crisis. In the summer of that year, following market distortions created by price controls, an estimated 2,000 independent gasoline stations closed and thousands of others were forced to curtail hours, including closing down on weekends, or at least limit their sales of gasoline during the summer months.[44] Some station owners were charging as much as US$1 for a gallon of gasoline, which in inflation adjusted terms is the equivalent of $4.91 in 2010 dollars.

The onset of the Yom Kippur War—which only lasted from October 6-26, 1973, but had far-reaching energy-related and economic consequences for the United States and the West—prompted the Arab members of OPEC to announce an embargo against the United States in response to the American decision to resupply the Israeli military during the war. The Arab oil

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[42] Richard Nixon, "Special Message to the Congress on Energy Resources," June 4, 1971, as reproduced by The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=3038&st=&st1.
[43] Jack Pitney, "Obama's Speech and Nixon's Ghost," TheNewNixon.org, February 24, 2009, http://thenewnixon.org/2009/02/24/obamas-speech-and-nixons-ghost/.
[44] Op Cit, p. 251.

producers also extended the embargo to other countries that supported Israel. The embargo both banned petroleum exports to the targeted nations and introduced cuts in oil production.

Since the beginning of 1973, Saudi King Faisal Bin Abdul-Aziz had been warning the Nixon administration that he would utilize the oil weapon unless the United States forced Israel to return Arab land it had been occupying since 1967. Aware that Syria and Egypt were planning war against Israel, the Saudi monarch had become increasingly frustrated that his warnings to Washington were being ignored. The Nixon administration failed to believe that the kingdom would follow through with the threat of employing the oil weapon, despite a face-to-face meeting between Saudi Oil Minister Ahmed Zaki Yamani and National Security Advisor Henry Kissinger in April. Yamani also conducted an interview with the *Washington Post* that same month in which the Saudi official said that if Washington expected Saudi Arabia to heed the American request to boost Saudi oil output from 7.2 million b/d to 20 million b/d, then the kingdom expected reciprocation. In addition, in a rare American television interview, King Faisal cautioned that, "America's complete support of Zionism against the Arabs makes it extremely difficult for us to continue to supply U.S. petroleum needs and even to maintain friendly relations with America."[45]

In May 1973, King Faisal first summoned Frank Jungers, chairman of the then Arabian American Oil Co. (Aramco), the predecessor company to Saudi Aramco, to warn him of the distinct possibility of the kingdom following through with an oil embargo, a threat that Jungers took seriously and which he passed on to the U.S. State Department, which ignored the warning. The Saudi ruler then brought in four other leading oilmen, stressing that Arab anger at American support of Israel was increasing and that, "You may lose everything. Time is running out." The Nixon administration failed to heed the warnings the oil executives delivered to Washington following their meeting with King Faisal about the Saudis making good on their threats.[46]

[45] Donald Neff, "Nixon Administration Ignores Saudi Warnings, Bringing On Oil Boycott," *Washington Report on Middle East Affairs*, October/November 1997, 70-72 , http://www.wrmea.com/backissues/1097/9710070.html.
[46] Donald Neff, "Nixon Administration Ignores Saudi Warnings, Bringing On Oil Boycott," *Washington Report on Middle East Affairs*, October/November 1997, 70-72, http://www.wrmea.com/backissues/1097/9710070.html.

On June 29, 1973, President Nixon established the Energy Policy Office, which was given the mandate of formulating and coordinating energy policies at the presidential level. Nixon appointed an "energy czar," former Colorado governor John A. Love, with the authority to allocate oil supplies,[47] but the move was designed more to manage U.S. domestic problems that had been created by cumbersome price controls and environmental regulations than to prepare the United States for a possible oil embargo.

Throughout the summer and into the fall of 1973, the Nixon administration continued to ignore the warnings from both Saudi Arabia and senior American oil executives. When Egypt and Syria successfully attacked Israel on October 6, Washington's support of Israel worried those same oil executives, who feared that Saudi Arabia would make good on its threat to unleash an oil embargo on the United States and the West. On October 12, the chairmen of Aramco's four parent companies—J.K. Jamieson of Essco, Rawleigh Warner of Mobil, M.F. Granville of Texaco, and Otto N. Miller of Socal—jointly expressed their concerns about a potential oil embargo and price hike if the United States blatantly supported Israel in a memorandum delivered to President Nixon. The next day, the Nixon administration began a massive airlift of weapons and ammunition to Israel.[48]

During the next several days, the Israeli military began to make up ground, pushing the Syrians back beyond the 1967 cease-fire line on the Golan Heights, and, on October 16, breaking through the Egyptian line with a small Israeli contingent crossing the Suez Canal into Egypt proper.

On that same day, delegates from the Gulf OPEC members—Saudi Arabia, Iran, Iraq, Abu Dhabi, Kuwait, and Qatar—met in Kuwait, agreeing to hike the price of crude by a staggering 70 percent, from $3.01 to $5.12 bbl. On October 17, the five Gulf Arab oil ministers (minus Iran) were joined by their counterparts from Algeria, Bahrain, Egypt, Libya, and Syria in Kuwait to discuss measures to punish the United States and others supporting Israel. Although the gathering encompassed all the members of the Organization of Arab Petroleum Exporting

[47] Richard Nixon, "Radio Address About the Nation's Economy," July 1, 1973, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=3890&st=&st1.
[48] Donald Neff, "Nixon Administration Ignores Saudi Warnings, Bringing On Oil Boycott," *Washington Report on Middle East Affairs*, October/November 1997, 70-72, http://www.wrmea.com/backissues/1097/9710070.html.

Countries (OAPEC), it was not deemed an OAPEC council of ministers meeting, but rather as a conference of Arab oil ministers. Because the goal of the meeting was political rather than economic, it fell outside of OAPEC guidelines.[49]

Though there were proposals to nationalize all American assets in the Middle East and liquidate Arab funds in American banks, nine of the 10 oil ministers at that conference ultimately agreed to an oil embargo that included a 5 percent cut in production from September 1973 levels for every month that the United States and others continued to back Israel. Iraq, which preferred nationalization of oil concessions to the use of the "oil weapon" of an embargo, declined to sign the conference's resolution.[50]

On October 18, the Saudis went one step further, stating that the kingdom would cut an additional 5 percent of its production per month. On October 19, President Nixon requested approval from the U.S. Congress to provide Israel with $2.2 billion in emergency military aid to pay for the weaponry that Washington was sending to its Middle East ally. The following day, Saudi King Faisal announced a full oil embargo on all oil exports to the United States and other supporters of Israel.[51] Abu Dhabi, Algeria, Bahrain, Kuwait, and Qatar immediately followed suit.

According to the October 17 conference resolution, the production cuts were to continue until Israel evacuated the occupied territories and the legitimate rights of the Palestinian people were restored. The decision on the production cuts was subsequently adjusted several weeks later on November 4. Production cuts were raised to 25 percent below the September level, to be implemented in November. This was to be followed by a further 5 percent reduction in December. Those nations with "most favored" status as determined by the Arab oil producers would receive their full requirement of oil. Those nations with "preferred countries" status would be allowed to import the equivalent of their average imports of Arab oil during the first nine months of 1973 or during the month of September 1973, whichever was greater. Nations deemed

[49] Robert Mabro, "The oil weapon: can it be used today?" *Harvard International Review*, Fall 2007 http://www.entrepreneur.com/tradejournals/article/172835091.html.
[50] Ibid.
[51] Rachel Bronson, *Thicker Than Oil: America's Uneasy Partnership With Saudi Arabia* (London: Oxford University Press, 2006) 118-9.

"neutral" by the Arab producers would have their imports reduced by the same rate as the general cutback and by a proportion of the additional amounts supplied to the "most favored" and "preferred countries," while the embargoed countries of the United States, the Netherlands, Portugal, South Africa, and Rhodesia would receive no supply of Arab oil.[52]

Given the complexities of cutting output and apportioning supplies based on categories, the embargo would most likely have been difficult to maintain over an extended period of time. Skyrocketing of oil prices and cuts as a result of the embargo hurt the economies of those developing nations that were "friendly" to the Arab producers even more so than those industrialized countries deemed "non-friendly."

What the Arab producers recognized was that the production cuts were more effective than the embargo itself, as embargoed countries could still shift from one supplier to another at a price, as long as other countries shifted supplies as well. In the end, less oil on the market hurt all consumers. The Yom Kippur War ended on October 25 with a final cease-fire that left Israel in control of the Sinai Peninsula and the Golan Heights. But the Saudis were not willing to budge on lifting the embargo or restoring production until Washington demonstrated it was seriously committed to ending the Arab-Israeli conflict.[53]

U.S. Secretary of State Henry Kissinger then went into high gear, engaging in "his shuttle diplomacy," visiting the Middle East repeatedly through the following months to negotiate disengagement agreements between Israel and Egypt and between Israel and Syria, while making a point of repeatedly visiting the kingdom to develop a rapport with the Saudi leadership.[54] Nixon and Kissinger believed that if Israel was victorious in the war, the Arab countries would realize that the best way to achieve their objectives would be through cooperation with the United States and its diplomatic efforts rather than by seeking military backing from the Soviet Union.[55]

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[52] Robert Mabro, "The oil weapon: can it be used today?" *Harvard International Review*, Fall 2007 http://www.entrepreneur.com/tradejournals/article/172835091.html.
[53] Rachel Bronson, *Thicker Than Oil: America's Uneasy Partnership With Saudi Arabia* (London: Oxford University Press, 2006) 119-20.
[54] Ibid.
[55] *Nixon's Economy*, 260.

At a meeting held in Kuwait on November 19, 1973, the Arab oil ministers had begun to show that they were open to flexibility, agreeing not to impose the 5 percent supply reduction scheduled for December on European Economic Community countries (other than the Netherlands) in appreciation of friendly statements made by the Europeans. A week later Japan and the Philippines, both deemed to be friendly, were also excused from the supply reduction. On December 24 and 25, the 25 percent production cutback rate from the September levels was reduced to 15 percent, and the 5 percent reduction scheduled for January 1974 was abandoned.[56] Kissinger's gamble eventually paid off but not before throwing the United States into a major energy crisis.

U.S. diplomacy and efforts by Egyptian President Anwar Sadat to convince Saudi King Faisal that lifting the embargo would help support American efforts to induce Israel to remove itself from the "occupied territories" were beginning to have traction. Yet, there were still heightened tensions between Washington and its erstwhile Arab oil-producing friends over the embargo and reduced global supplies. In a November 19 speech, Kissinger stated that: "It is clear that if pressures continue unreasonably and indefinitely, that then the U.S. will have to consider what countermeasures it may have to take." The U.S. top diplomat ordered a number of studies looking into how to retaliate against Arab members of OPEC. This type of rhetoric, of course, drew a sharp response from Saudi Oil Minister Yamani, who in a subsequent speech in Europe, warned that American "countermeasures" would provoke the Arabs into blowing up their own fields.[57]

However, Saudi Arabia was recognizing the need to put an end to the embargo, particularly after Shah Mohammed Reza Pahlavi of Iran proposed what some referred to as the "Christmas Eve massacre"—a more than doubling of the price of oil from $5.12 to $11.66 a barrel—at a December 1973 meeting in Tehran. King Faisal was aware that such a gigantic price jump, coupled with a reduction of OPEC output, would prove disastrous to the West and undermine Washington's ability to thwart communism. Three days later, Saudi Arabia led other Arab OPEC

[56] Robert Mabro, "The oil weapon: can it be used today?" *Harvard International Review*, Fall 2007, http://www.entrepreneur.com/tradejournals/article/172835091.html
[57] Rachel Bronson, *Thicker Than Oil: America's Uneasy Partnership With Saudi Arabia* (London: Oxford University Press, 2006) 121.

members in agreeing to increase their output, beginning the end of the embargo. However, Arab oil ministers only unconditionally lifted the embargo on March 18, 1974, after Kissinger had demonstrated movement on an Israeli-Egyptian resolution to the conflict, with the kingdom announcing a one million b/d boost in its oil production.[58]

The Arab oil embargo forced President Nixon to announce a dramatic program to ease the oil shortages. He ordered industrial plants to halt any conversions from coal to oil, required all air travel to be cut back by 10 percent and relaxed environmental regulations to allow more use of fuels other than oil.[59] As discussed previously, the president called on Americans to use “less heat, less electricity, less gasoline.”[60] Congress approved construction of the long-delayed Alaska oil pipeline and lowered the speed limit to 55 miles per hour to optimize car efficiencies. Congress also passed the Emergency Petroleum Allocation Act, giving the president authority to take over, from the oil companies, the allocation of oil and oil products.

As noted above, Nixon also announced “Project Independence” whose aim was to end U.S. dependence on foreign oil. Forced to resign because of the Watergate scandal, Nixon was never able to see the program through. In August 1974, Federal Energy Administration head John Sawhill opened “Project Independence” hearings by admitting that the United States will always need to import oil. Experts testifying had a range of estimates, with one American energy executive speculating that the United States could cut its dependence on foreign oil from 18 percent of U.S. total energy consumption then to around 15 percent in 1980 and possibly between 10 to 13 percent by 1985, while Sawhill suggested that the United States would be importing one quarter of its oil needs in 1985, down from about one third in 1974. Although the agency committed to having a blueprint on Project Independence for President Gerald Ford by November 1, 1974, the blueprint would not contain an action plan, but rather “options” for debate within the government that would ultimately lead to a White House decision.[61]

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[58] Ibid, 122.
[59] *Nixon’s Economy*, 262.
[60] Richard Nixon, “Address to the Nation About Policies To Deal With the Energy Shortages,” November 7, 1973, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=4034&st=&st1.
[61] “Project Realism,” *Time*, September 2, 1974, http://www.time.com/time/magazine/article/0,9171,943755,00.html.

The Federal Energy Administration was to elaborate on the economic, environmental, and diplomatic consequences of the various options, which were grouped into four categories: 1) a minimum program essentially consisting of a standby allocation and stockpiling plans and efforts to import more oil from nations least likely to be party to an Arab-style embargo; 2) a moderate program of heavy spending to develop alternate sources of fuel and energy-saving devices and the development of conservation plans for consumers and industry; 3) a drastic plan by the federal government to increase energy supplies, reduce demand, or both, including the possibilities of production subsidies to energy firms, the easing up of environmental restrictions on offshore drilling and strip mining, and high taxes on energy consumption; and 4) an ecologically friendly program designed with tough limits on offshore drilling and coal mining, coupled with dramatic efforts to slash energy demand and develop solar energy.[62]

In his State of the Union speech on January 15, 1977, President Ford outlined a 10-year-program to reach American energy independence from foreign oil producers by 1985, with this program including "200 major nuclear power plants; 250 major new coal mines; 150 major coal-fired power plants; 30 major new [oil] refineries; 20 major new synthetic fuel plants; the drilling of many thousands of new oil wells; the insulation of 18 million homes; and the manufacturing and the sale of millions of new automobiles, trucks, and buses that use much less fuel."[63] The president stressed that "additional steps to cut long-term consumption" would include proposals to Congress for legislation to make thermal efficiency standards mandatory for all new buildings in the United States; a new tax credit of up to US$150 for homeowners who install insulation equipment; the establishment of an energy conservation program to help low-income families purchase insulation supplies; and legislation to modify and defer automotive pollution standards for five years, which would enable the nation to improve automobile gas mileage by 40 percent by 1980. According to President Ford, "These proposals and actions, cumulatively, can reduce our dependence on foreign energy supplies from 3 to 5 million barrels per day by 1985."[64]

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[62] Ibid.
[63] Gerald Ford, "Address Before a Joint Session of the Congress Reporting on the State of the Union," January 15, 1975, transcript,The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=4938.
[64] Ibid.

Tensions between the United States and OPEC were still running high as President Ford took office. Secretary of State Kissinger added fuel to the fire by suggesting in a lengthy interview with *Business Week* that ran in mid-January 1975 that U.S. military force could not be ruled out against oil producers in the event of a future embargo. In the article, Kissinger explained that "The only chance to bring oil prices down immediately would be massive political warfare against countries like Saudi Arabia and Iran to make them risk their political stability and maybe their security if they did not cooperate…" but he noted that such a strategy could turn out to be counterproductive.[65] Stressing that potential military action against oil producing nations would be "a very dangerous course," Kissinger went on to say that, "I am not saying that there is no circumstance where we would not use force. But it is one thing to use it in the case of a dispute over price, it's another where there's some actual strangulation of the industrial world."[66] President Ford, quoted in *Time* magazine, said he stood by Kissinger's comments, stating, "If you read his answer to a very hypothetical question, he didn't say that force would be used to bring a price change. His language said he wouldn't rule force out if the free world or the industrialized world would be strangled. I would reaffirm my support of that position as he answered that hypothetical question."[67]

In an editorial in the *Los Angeles Times* printed on April 13, 1975, former Aramco CEO Tom Barger warned that American seizure of Saudi oil fields and facilities could prove disastrous for the United States and have far-reaching price and supply consequences. In his op-ed piece, Barger provided a hypothetical view of what the Saudi oil minister would recommend to the kingdom's council of ministers regarding potential military seizure of Arab oil fields. In this scenario, Barger notes that no other countries appeared to back the U.S. threat to seize oil fields, but that, "None of them, least of all the United States, has more than a 60-day supply of oil on hand." Pointing out that world oil production was constricted by 4 million b/d at the peak of the 1973 embargo, Barger predicted that an attack on Arab oil fields could result in a cutback of 15 million b/d of Arab oil output, resulting in even worse "economic dislocations."[68]

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[65] Henry Kissinger, *Years of Renewal* (New York City: Simon & Schuster, 1999).
[66] "The World: The Intervention Issue," *Time*, January 20, 1975, http://www.time.com/time/magazine/article/0,9171,912693-1,00.html.
[67] "Ford: They will see something is being done," *Time*, January 20, 1975, http://www.time.com/time/magazine/article/0,9171,912687-3,00.html.
[68] Thomas C. Barger, "Suppose We Seized Arab Oil Fields…" *The Los Angeles Times*, April 13, 1975.

In examining how the Saudis could effectively destroy the kingdom's oil fields "to deny any invader use of our oil for as long as possible," Barger, as the hypothetical oil minister, recommends avoiding trying to destroy the country's oil wells, but rather rendering them inoperable and hindering their rehabilitation. In addition, the scenario suggests that the kingdom could destroy "all the facilities for producing, transporting and refining the oil." Part of this can be accomplished by cutting off cooling water supply, lubricant supplies, or the flow of oil to be heated, while tanks, gas-oil separation plants, and pump stations and their ilk can be "destroyed by fire deliberately fed by crude oil or products and started by explosives if time permits; otherwise by ignition of spilled oil." The hypothetical recommendations suggest how handily the Saudis could take out oil-loading facilities as well as disable long sections of pipeline.[69]

In addition, Barger, as Saudi oil minister, would recommend to his OPEC colleagues an OPEC-wide permanent ban on any organization aiding the invading nation in rehabilitating the fields and the seizure of any such group's assets in OPEC countries. The kingdom would also request that OPEC blackball any tankers carrying oil from restored fields operated by the invading party. Highlighting the likely results from the Saudis disabling their own fields and infrastructure, Barger, as the hypothetical oil minister, acknowledges that oil prices would rise dramatically from this loss, contributing further to worldwide inflation. Even those countries fortunate enough to have 90 days worth of oil reserves would likely have to ration their supplies, and they would not be able to rely on the restoration of Saudi oil production or the resumption of full output by other OPEC countries before running out of their supplies. According to the hypothetical minister's assessment, "Depending on the time available, we can so destroy the oil facilities as to require at least one to three years work before preinvasion levels of production can be restored."[70]

Around the same time as Barger's op-ed piece appeared in the *Los Angeles Times*, a preliminary meeting held in Paris between oil producers and consumers on the global economic crisis failed as talks collapsed over whether the agenda should focus on oil/energy issues or look at the broader economic picture. On September 24, 1975, OPEC announced a 15 percent increase in

[69] Ibid.
[70] Ibid.

government per barrel revenues beginning October 1, and from October into December, OPEC members Kuwait, Venezuela, and Iraq all made moves to nationalize oil assets in their respective countries.[71]

In this post-embargo period, the United States began to work on diplomatic strategies to reduce the power of OPEC. As Henry Kissinger notes in his memoir, *Years of Renewal*, "For the power of OPEC to be broken, solidarity among the industrial democracies had to be established across a wide front, both political and economic."[72] Nixon called a Washington Energy Conference in February 1974 and that led to the establishment of the Energy Coordinating Group (ECG). As President Ford took office, this ECG was being institutionalized into the International Energy Agency (IEA), with a substantive program in "emergency sharing; energy conservation; active development of alternative energy sources; creation of a financial safety net."[73] The United States also appealed to key countries like Saudi Arabia to consider the benefits of consumer-producer cooperation. U.S. bilateral economic development commissions were created with Saudi Arabia and Iran, with an eye to encourage the use of oil surpluses for nation building and development projects. The U.S. aim was to "reduce the producers' free funds for waging economic warfare or blackmail against the industrial democracies, and to return some of the extorted funds to our economy."[74]

In addition to the bilateral economic commissions, the United States also put forward proposals to stabilize raw material prices and enhance food security for poor nations. Speaking at the United Nations, President Ford talked about the unprecedented stress being placed on the world economy by shortages of food and oil. The president suggested that the United States would initiate a generous U.S. food initiative at an upcoming World Food Summit. As Kissinger notes in his memoirs, "…we were content to contrast the conduct of the near-monopolists on oil and the near-monopolists on food. While Ford formally rejected the idea of using food as a political weapon, many world leaders surely did not overlook the existence of that option if we were

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[71] U.S. Department of Energy, Energy Information Administration, "World Oil Market and Oil Price Chronologies: 1970-2000."
[72] Henry Kissinger, *Years of Renewal* (New York City: Simon & Schuster, 1999).
[73] Ibid, 669.
[74] Ibid, 677.

pushed too far."[75] Ford also spoke against OPEC explicitly at the Ninth World Energy Conference in September 1974, "Sovereign nations cannot allow their policies to be dictated or their fate decided by artificial rigging and distortion of world commodity markets. No one can foresee the extent of damage, nor the end of the disastrous consequences if nations refuse to share nature's gifts for the benefit of all mankind."[76] OPEC leaders initially responded negatively to the Ford and Kissinger speeches but, starting that month, the cartel announced it would not raise prices for six months.

The United States continued to push initiatives to get the IEA and other consumer cooperation frameworks established. It proposed to the IEA in February 1975 that a floor price for oil be established to encourage the development of alternative energy. The proposal was rejected by Germany and others. The United States also pushed for the development of non-OPEC production, even suggesting unsuccessfully to Russia a grain deal that would have encompassed discounted oil supplies.

On the domestic front, with the United States still in the grip of a recession and suffering from high energy prices, President Ford signed on December 22, 1975, the Energy Policy and Conservation Act of 1975. The act was meant to move the United States away from energy dependence on OPEC oil and had several goals, including: the establishment of the Strategic Petroleum Reserve (SPR) for the storage of up to one billion barrels of oil on U.S. turf; the decontrol of prices on domestic crude oil over a 40-month period; and the formation of the Corporate Average Fuel Economy (CAFE) standards that mandated increases in average automobile fuel economy. The standards set a corporate sales-fleet average of 18 miles per gallon beginning with the 1978 model year, and established a schedule for attaining a fleet goal of 27.5 miles per gallon by 1985.[77] President Ford tried to push through taxes on oil imports and oil company profits, but these efforts failed to garner support within the Democrat-controlled Congress thanks to heavy lobbying from the oil industry.

[75] Ibid, 678.
[76] Ibid, 679.
[77] U.S. Department of Energy, Energy Information Administration, "Petroleum Chronology of Events 1970-2000," http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm.

Energy issues did not fall from the U.S. political spectrum during the next presidential administration. If anything, OPEC and oil market disruptions remained a major challenge for the administration of President Jimmy Carter. Indeed, President Carter began his administration with strong rhetoric on the OPEC issue. In a televised speech to the American public on April 18, 1975, President Carter made headlines on the issue by likening the U.S. energy problem as "the moral equivalent of war," and went on to point out that the United States was "the most wasteful nation on earth. We waste more energy than we import. With about the same standard of living, we use twice as much energy per person as do other countries like Germany, Japan and Sweden."[78]

Among the principles he addressed, the president stated that the United States must reduce its vulnerability to potentially harmful future oil embargoes by reducing American demand for oil, taking advantage of abundant energy resources like coal and developing a strategic petroleum reserve. The cornerstone of his policy, President Carter stressed, was to reduce American energy demand through conservation. Some of the goals the president had set for his energy agenda to accomplish by 1985 were: reducing the annual growth rate in domestic energy demand to less than 2 percent; cutting gasoline consumption by 10 percent below its current level; slashing U.S. oil imports from a potential 16 million b/d to six million b/d[79]; establishing a strategic petroleum reserve of one billion barrels, roughly what the United States would consume in a six month period; boosting domestic coal production by about two thirds to more than one billion tons a year; insulating 90 percent of American homes and new buildings; and employing solar energy in more than two-and-a-half million homes.[80]

To facilitate his plans for energy, President Carter on August 4, 1977, signed the Department of Energy Organization Act of 1977, which placed all federal energy agencies and programs with the exception of the Nuclear Regulatory Commission under the control of a single department, the Department of Energy (DOE). Noting that the act was creating a cabinet-level department for the first time in 11 years, the president stated that, "The impending crisis of energy shortages has

[78] Jimmy Carter, "The President's Proposed Energy Policy," April 18, 1977, transcript, American Experience, pbs.org, http://www.pbs.org/wgbh/amex/carter/filmmore/ps_energy.html.
[79] Both these targets were actually achieved.
[80] Ibid.

brought about an unprecedented quick action by the Congress in establishing the new Department of Energy … the Department can now, I think, begin to deal in a much more aggressive and effective way not only with the needs of suppliers to increase the production of oil, gas, coal, solar, nuclear powers, but also to make sure that consumers of our country are treated fairly, that prices are adequate and not excessive."[81]

As student protests against the Shah Pahlavi began in Iran in early 1978, Iran and Saudi Arabia came together that following June to thwart efforts by price hawks within OPEC to fix the price of OPEC oil in a currency other than the U.S. dollar. At the very least, these hawkish producers were pushing to raise the price of OPEC oil to mitigate the declining purchase value of their oil revenues resulting from world inflation and the diminishing worth of the U.S. dollar, the currency in which OPEC was being paid for its oil.[82]

Despite three days of intense and bitter negotiating between Saudi Arabia and Iran and the group's price hawks, the two Gulf producers held firm—determined to maintain prices steady for the remainder of 1978 as a means to support Western economic recovery, help strengthen the dollar, and reinforce relations with their largest customers, the United States and Western Europe. OPEC's price hawks made their displeasure known, suggesting that the Saudis and Iranians were behaving as agents of the United States and the West. Indeed, Libyan Oil Minister Ezzedin Ali Mabruk was quoted after the meeting as saying, "When some members have a free political will, we'll have a stronger OPEC." As a means of appeasing those discontented members, the OPEC ministers agreed at that meeting to establish a committee to look into how to best protect oil revenues against the declining value of the U.S. dollar, including the notion of the official oil price based on a "basket" of more stable currencies.[83]

On November 6, 1978, the Shah of Iran placed the Gulf country under military rule, following several days of student-led rioting in Tehran and other large Iranian cities protesting corruption in the Shah's autocratic regime. There were also strikes, including a then week-long crippling oil

[81] Jimmy Carter, remarks on signing S.826 and H.R. 692 into law (Department of Energy Organization Act and Bill Amending the Small Business Administration), August 4, 1977, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=7916.
[82] Paul Lewis, "OPEC Will Maintain Present Oil Price for the Rest of '78," *The New York Times*, June 19, 1978.
[83] Ibid.

strike initiated by workers in Iran's southern oil fields who were demanding political concessions. These concessions focused on the end of martial law that had been imposed in many cities two months earlier, the release of all political figures, and the dismissal of all foreign workers from Iranian oil operations.[84]

The Iranian oil strike continued for the next four months, as the Shah desperately tried to stay in power by making token concessions and replacing his military government with a civilian government led by resistance leader Shahpour Bakhtiar, but the Iranian ruler ultimately fled his country on January 16, 1979, under the guise of taking a vacation. The return of exiled Ayatollah Ruhollah Mosavi Khomeini on February 1 led to the Bakhtiar government being forced out of power on February 11. Referendum results on April 1 established Iran as an Islamic republic and Khomeini as the "Supreme Leader." Iran resumed oil exports on March 5, but exports were inconsistent and at lower volumes initially under the new regime.

In 1978, Iran's production declined by about 3.4 million b/d, from 5.8 million b/d in August to 2.4 million b/d in December. Saudi Arabia boosted its output by about 3.3 million b/d within the same period to reach its then all-time high of 10.4 million b/d, with other OPEC members increasing their collective levels by about 700,000 b/d and non-OPEC members bumping up their production by 800,000 b/d. Despite the increase in these other countries' production in excess of the lost Iranian volumes (to the tune of 1.3 million b/d extra for markets), panic buying, stockpiling, speculation, and hoarding in the wake of the Shah's fall resulted in major oil price increases in 1979.[85]

Entering into 1979, OPEC had decided to flex its pricing power after a period of restraint, announcing a 14.5 percent price rise beginning April 1, and following that up with another 15 percent price hike effective September 1. That second price jump came after the DOE began phased oil price decontrol on June 1. In addition to the U.S. halting all oil imports from Iran, three other OPEC producers—Iraq, Libya and Kuwait— all cut production in 1979 and, in

[84] Nicholas Gage, "Most Oil Workers Back at Job in Iran from 2-Week Strike," *The New York Times*, November 13, 1978.
[85] A.F. Alhajji , "Will Iran's Nuclear Standoff Cause A World Energy Crisis" (Part 2 of 2), *Middle East Economic Survey* XLIX, no. 14 (April 3, 2006).

December, Saudi Arabia announced it was raising its crude marker price to $24 bbl. The combination of all of these factors contributed to crude oil prices leaping an astounding 118 percent between January and December 1979.[86]

That summer, Americans once again saw shortages at the gasoline pump, with gas stations keeping short hours, closing on the weekend or limiting sales to a few gallons, as supplies fell by 5 to 20 percent of 1978 levels.[87] By mid-July, President Carter was compelled to address the nation about the energy crisis in a televised speech that was subsequently dubbed the "crisis of confidence" or "malaise" speech. The speech is often linked to the president's ultimate political undoing and failed bid for re-election in 1980.

The president, refusing to place blame solely on the government for the nation's energy crisis of gasoline shortages and high prices, called on the American people to shoulder their share of that responsibility, noting that "too many of us now tend to worship self-indulgence and consumption." President Carter pointed out that, "In little more than two decades we've gone from a position of energy independence to one in which almost half the oil we use comes from foreign countries, at prices that are going through the roof. Our excessive dependence on OPEC has already taken a tremendous toll on our economy and our people." Continuing, the president stressed that, "This intolerable dependence on foreign oil threatens our economic independence and the very security of our Nation."[88]

In the speech, President Carter stated that he was setting a clear goal for the country's energy policy: "Beginning this moment, this Nation will never use more foreign oil than we did in 1977—never. From now on, every new addition to our demand for energy will be met from our own production and our own conservation."[89] The president proposed a $142 billion energy plan designed to achieve energy independence by 1990—helped by the creation of the country's first national solar bank, which would allow solar energy to meet 20 percent of U.S. energy needs by

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[86] "How Does An Oil Crisis Impact the US Dollar?" *ActionForex*, May 22, 2008, http://www.actionforex.com/long-term/long-term-forecasts/how-does-an-oil-crisis-impact-the-us-dollar?-2008052246903/.
[87] "Nation: Playing Politics With Gas," *Time*, May 28, 1979, http://www.time.com/time/magazine/article/0,9171,947293-3,00.html.
[88] Jimmy Carter, "Address to the Nation on Energy and National Goals: The Malaise Speech," July 15, 1979, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=32596&st=&st1.
[89] Ibid.

the year 2000. The president pledged to dismantle President Nixon's crude oil price controls—a process he began and which was completed in the Reagan administration—and also imposed an import quota of 8.5 million b/d. President Carter also created the $88 billion Synfuels program, which was to generate 2.5 million b/d of synthetic fuels by 1990.[90] Unfortunately, the Synfuels program was ultimately not supported by President Reagan, Congress or the energy industry. The effort was effectively killed off in late 1985 when President Reagan signed a bill abolishing the Synthetic Fuels Corp., the agency overseeing the nascent Synfuels industry.[91]

In his "Crisis of Confidence" address, President Carter called for a "windfall profits tax" (WPT) on American oil corporations, with that revenue helping in the development of alternative sources of energy. The president's tax proposal was at the time the best compromise between two polarized positions—open-ended deregulation advocated by the right, including Republican presidential candidate Ronald Reagan, and a call to nationalize oil companies from the left.[92]

President Carter signed into law the Crude Oil Windfall Profit Tax Act on April 2, 1980. The tax was intended to create a trust fund that would help low-income families offset the burden of higher energy costs while at the same time providing new money for public transportation and alternative energy. The law set excise taxes as high as 70 percent on the difference between the market-determined price of oil and a (lower) price set by law.[93] The WPT was dropped in August 1988 when President Reagan persuaded Congress to repeal the act. From 1980 to 1988, the WPT brought in $80 billion in gross revenues, which unfortunately was significantly less than the $393 billion projected—according to an analysis released in March 2006 by the Congressional Research Service (CRS). According to the CRS study, the WPT tax lowered American domestic production by somewhere between 1.2 percent and 4.8 percent during that period. The windfall profit tax was intended to help deregulate oil prices. Once deregulated, prices soared. But the tax collected up to 70 percent of those profits, much of it from existing domestic oil production, while taxes remained low on new production. The CRS suggested that the WPT even increased

[90] Ronald Bailey, "Energy Independence: The Ever-Receding Mirage," *Reason Magazine*, July 21, 2004, http://www.reason.com/news/show/34845.html.
[91] J. Raloff , "Congress Kills the U.S. Sunfuels Corp," *Science News*, January 11, 1986.
[92] Kevin Mattson, "Past and Present: 'Malaise' and the Energy Crisis," *U.S. News & World Report*, August 13, 2008, http://www.usnews.com/articles/opinion/2008/08/13/past-and-present-malaise-and-the-energy-crisis.html.
[93] William F. Shughart II, "Windfall Profits Tax' on Oil Would Slow Flow," The Independent Institute, November 4, 2005, http://www.independent.org/newsroom/article.asp?id=1605.

U.S. dependence on foreign oil, with reliance on imports estimated to be three to 13 percent higher.[94]

The Iranian hostage crisis—which began with the capture of U.S. Embassy staff in Tehran by young Islamist revolutionaries on November 4, 1979, and ended with 52 hostages released on Ronald Reagan's first inauguration day on January 20, 1981—not only helped scupper President Carter's re-election hopes but also was a key component of the second global oil shock of the 1970s. Following the capture of the Americans, President Carter had first banned all U.S. imports of Iranian oil on November 12, 1979, and then frozen some $8 billion worth of Iranian asserts in the United States two days later. On November 15, Iran cancelled all contracts with U.S. oil companies.[95]

In the aftermath of the Soviet invasion of Afghanistan on December 27, 1979, President Carter made it clear where the United States stood on protecting its interests in the Persian Gulf against potential Soviet hegemony in the area. In his State of the Union address of January 23, 1980, the president declared that any "attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force."[96] This declaration, which was to be known as the Carter Doctrine, was the strongest commitment made by an American president to the Gulf states.

As President Ronald Reagan was taking office, OPEC was still increasing oil prices. Saudi Arabia bumped the price of its benchmark Arab Light to $24/bbl effective April 1. In September 1980, Iraq invaded Iran, and, by November, the combined production of both countries was only one million b/d and 6.5 million b/d less than a year before. The combination of the Iranian Revolution and the Iraq-Iran War helped cause crude oil prices to more than double, increasing

[94] Mark Clayton, "Congress, states look to tax oil firms' profits," *The Christian Science Monitor*, April 28, 2006, http://www.csmonitor.com/2006/0428/p01s03-usec.html.
[95] Department of Energy, Energy Information Administration, "Annual Oil Market Chronology 1970s," http://www.eia.doe.gov/emeu/cabs/AOMC/7079.html.
[96] Jimmy Carter, "The State of the Union Address Delivered Before a Joint Session of Congress," January 23, 1980, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=33079.

from $14/bbl in 1978 to $35/bbl in 1981.[97] In the latter half of 1980, OPEC's pricing structure collapsed, despite Saudi efforts to try to reach a consensus within the organization on a unified price and to replace erratic price jumps with quarterly price increases tied to inflation in the industrialized nations. At OPEC's September 18 meeting in Vienna that year, the Saudis agreed to raise the price of their oil from $28/bbl to $30, while the other OPEC members said that they would freeze theirs at existing levels, which were averaging about $32.[98] Three months later, at their end-year conference in Bali, OPEC ministers effectively maintained the price relationship reached at the September gathering, with Saudi Arabia agreeing to boost the price of its marker crude another $2/bbl to $32, while a new ceiling of about $40 would apply to higher-quality African crudes that had been priced up until then at about $37/bbl.[99]

Amid continued OPEC efforts to strengthen the price of oil, President Reagan brought a fundamentally different perspective to how the U.S. government should look at energy than his predecessor, both in terms of the domestic oil and gas markets, as well as the approach to interfacing with OPEC. In his July 1981 address to Congress the president explained his national energy policy plans this way: "Our primary objective is simply for our citizens to have enough energy, and it is up to them to decide how much energy that is, and in what form and manner it will reach them. When the free market is permitted to work the way it should, millions of individual choices and judgments will produce the proper balance of supply and demand our economy needs."[100] Reagan was committed to free market policies both globally and for American domestic oil and gas markets and focused his efforts on deregulation, instead of energy independence, conservation, and alternative energy as his predecessors had.

On the domestic front, President Reagan wasted no time once in office in abolishing price controls on domestic oil production and marketing that had been implemented by President Nixon and partially repealed under the Carter administration. On signing the executive order that did away with the price controls on January 28, 1981, President Reagan stated that "For more

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[97] Oil Pricing and Analysis, WTRG Economics, http://www.wtrg.com/prices.htm.
[98] "Business: Still Another OPEC Price Hike," *Time*, September 29, 1980, http://www.time.com/time/magazine/article/0,9171,952795,00.html.
[99] Pamela G. Hollie, "OPEC Meeting Ends with Sign of Accord on $2-$3 Oil Rise," *The New York Times*, December 16, 1980.
[100] Ronald Reagan, "Message to the Congress Transmitting the National Energy Policy Plans," July 17, 1981, transcript, American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=44096.

than nine years, restrictive price controls have held U.S. oil production below its potential, artificially boosted energy consumption, aggravated our balance of payments problems, and stifled technological breakthroughs. Price controls have also made us more energy-dependent on the OPEC nations, a development that has jeopardized our economic security and undermined price stability at home."[101] The executive order immediately removed remaining crude oil price controls, pertaining to 15 percent of U.S. output—or 1.3 million b/d of a total 8.6 million b/d. Price controls on gasoline and propane, on both a wholesale and retail level, as well as limits on refiners' profit margins were also abolished.[102]

Convinced that federal interference with prices and supplies created the energy crisis in the early 1970s, the Reagan administration worked to remove hurdles to developing energy on most federal land, encouraged nuclear power, and strived to fill the 500 million-gallon SPR. The administration also was disinclined to support conservation measures, ending a tax credit for home energy conservation expenditures in early 1986. The same year, President Reagan also vetoed a bill requiring manufacturers to build appliances that conserved energy, because it "intrudes unduly on the free market."[103]

President Reagan was a staunch believer that government should not be involved in the energy business and even sought to do away with the DOE, but was unable to do so in part because of the department's oversight of the American nuclear industry. As a result of President Reagan's move toward oil price decontrol, U.S. domestic output did grow but so did cheap Middle East oil imports. By 1986, low oil prices and mature geology meant that, even with decontrol, domestic crude output was shrinking annually by three percent.[104]

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[101] Ronald Reagan, "Statement on Signing Executive Order 12287, Providing for the Decontrol of Crude Oil and Refined Petroleum Products," January 28, 1981, transcript, American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=43912.

[102] "Impact of Decontrol Hinges on U.S. Market Response," *Petroleum Intelligence Weekly*, February 2, 1981.

[103] Philip Shabecoff, "Peering into the Energy Future and Sighting Gas Shortages," *The New York Times*, February 22, 1987, http://www.nytimes.com/1987/02/22/weekinreview/peering-into-the-energy-future-and-sighting-gas-shortages.html?scp=23&sq=Reagan,%20tax%20on%20oil%20imports&st=cse.

[104] Peter Nulty, "Who Lost The U.S. Oil Industry?" *Fortune*, November 29, 1993, http://money.cnn.com/magazines/fortune/fortune_archive/1993/11/29/78672/index.htm..

As President Reagan entered the White House, countering OPEC power was not central to his strategies. He was instead determined to counter the Soviet Union's muscle-flexing in Afghanistan and potential spread of Soviet influence into the Persian Gulf and the developing world. He extolled the virtues of democracy, exceeded Soviet expenditures on defense, and backed anti-Soviet insurgencies. This put the Reagan Administration in good standing with Saudi Arabia, with whom the United States found a ready and wealthy partner in thwarting Moscow's efforts in Afghanistan and in trying to block the spread of Communism, particularly into the Persian Gulf. The kingdom, determined to bolster relations with the United States because of Washington's commitment to protect Saudi oil fields, saw the Soviet involvement in Afghanistan as a dedicated crusade to surround the Arabian Peninsula with radical regimes and seize control of the oil-rich Gulf monarchies.[105]

In September 1980, the United States had lent Airborne Warning and Control System (AWACS) planes to Saudi Arabia for its defense, and by October 1, 1981, President Reagan announced that he was formally notifying Congress of his administration's intention to sell the AWACS to Saudi Arabia. In explaining the sale to pro-Israeli Congressional representative Charles E. Schumer of New York, Richard Fairbanks, assistant secretary of state for congressional relations, wrote that "The Soviet invasion of Afghanistan, the turmoil of the Iranian revolution, the Iran-Iraq war, and the Soviet presence in South Yemen and Ethiopia underscore the region's instability, and the dangers of Soviet penetration and exploitation."[106] The administration got support for the deal from South Carolina Senator Strom Thurmond, ranking republican on the Armed Services Committee, who believed that Saudi Arabia would reciprocate this sign of U.S. friendship by pursuing an oil policy favorable to the United States. Thurmond declared, "Saudi Arabia is one of the largest suppliers of oil to the United States and the free world. Our economy would be wrecked if this and other oil from the Middle East were to fall under the control of the Soviet Union, or be subject to political concessions. We must help the Saudis protect their nation. By doing so we would greatly enhance our friendship and provide a United States military presence

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[105] Rachel Bronson, "The U.S. Saudi Love Affair Predates Bush," *The Los Angeles Times*, July 9, 2004, http://www.cfr.org/publication.html?id=7175.
[106] Nicholas Laham, *Selling AWACS to Saudi Arabia*, Westport, Connecticut: Praegar Publishers, 2002, p. 17.

through Air Force and contractor support of AWACS, and thereby create a base to ensure greater stability in this crucial part of the world."[107]

The Reagan administration increased its presence in the Gulf over the next several years. Starting in 1982, intelligence data from AWACS surveillance of Iranian troop dispositions was shared with Iraq. Then in 1983, when Iran clearly threatened that it would close the Gulf to oil exports from all states if its own exports were curtailed, the United States deployed a U.S. carrier force just outside the Straits of Hormuz. In May 1984, the United States provided "assistance" to Saudi Arabia in "direct aerial clashes with Iranian planes."[108]

During this period from 1981 to 1983, high oil prices and global recession had dented demand for oil, just at a time when new volume was emerging from non-OPEC countries. These trends kept oil prices under pressure, but the Saudi response was not initially to pro-actively try to lower the price of oil. To better contend with this global oil glut, OPEC instituted a formal production quota system in March 1983 that, for the first time, allocated output ceilings to each member country. Saudi Arabia did not receive a quota allocation, as the kingdom would serve as a "swing producer" to provide the balancing requirements to meet the market needs, in an attempt to stabilize oil prices.[109] But the kingdom's willingness to play the role of swing producer backfired and Riyadh increasingly lost market share to its competitors, including other OPEC members, who were cheating on their quotas even as prices continued to slump amid a continuing recession and global oil glut.

By the summer of 1984, Saudi Arabia surprised its OPEC colleagues and the oil markets by exceeding its voluntary quota of 4.5 million b/d by one million b/d, causing oil prices to slide further. The Saudi move was ostensibly the result of the kingdom's decision to exchange some 34 billion barrels of oil for 10 new Boeing 747 jetliners in a massive oil for goods barter arrangement—a deal brokered by the Reagan administration. Significantly, the Boeing planes oil

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[107] Ibid, 101.
[108] Fred Halliday, *The Reagan Administration and the Middle East*, in Morris H. Morley, Editor, *Crisis and Confrontation: Ronald Reagan's Foreign Policy*, Towota, New Jersey: Rowman & Littlefield, Publishers, 1988, p. 139.
[109] *Petroleum Intelligence Weekly*, XXII, no. 12 (March 21, 1983) 7.

barter deal involved a hidden discount for the Saudi oil at below official prices and as such destabilized the oil market even more.[110]

By the summer of 1985, Saudi Arabia's production had fallen to just 25 percent of its capacity, and the kingdom made the decision to start an oil price war to claw back its market share. The result was a price collapse, with oil hitting a low of $8.76/bbl (OPEC basket equivalent) in July 1986.[111] It is unclear how much influence, if any at all, that the Reagan administration had on the Saudi decision to flood the markets with its oil in 1986. But the United States was certainly grateful for lower oil prices that perhaps, not coincidentally, also helped bankrupt and disable the Soviet Union, which was dependent upon oil for its hard currency.[112]

The improvement in U.S.-Saudi relations and a unified worldview about the Soviet Union was accompanied by similarly friendly oil relations. Saudi Arabia sought oil refining and downstream investments in the United States and, in 1981, Saudi Oil Minister Hisham Nazer made an important policy pronouncement during a visit to Harvard University. Nazer called for a system of "reciprocal energy security" and implied that, in return for demonstration of security of demand on the part of the United States, America could gain guaranteed access to a "fairly priced ocean of oil."[113]

In a radio address to the nation on oil prices in April 1986, President Reagan extolled the virtues of the free market having driven down gas prices, saying that, "The oil price decline of the 1980s has been a triumph not of government, but of the free market; and not of political leaders, but of freedom itself." The president, pointing out that he had a week after first taking office in 1981 decontrolled the price of domestic oil and stopped the federal government from putting ceilings

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[110] Amy Myers Jaffe, "More Oil States Turn to Barter to Halt Slump," *The Asian Wall Street Journal*, October 8, 1984, p. 1.

[111] Shaikh Ahmed Zaki Yamani, "OPEC: Past Mistakes and Future Challenges,"*Middle East Economic Survey*, XXXVII, no. 29 (April 18, 1994).

[112] In April 1986, Vice president George Bush visited Saudi Arabia and publicly expressed his view that oil prices had fallen too low. Bush said on the eve of his trip that he would be "selling very hard" to persuade the Saudis, "of our own domestic interest and thus the interest of national security…I think it is essential that we talk about stability and that we not have a continued free fall…I happen to believe, and always have, that a strong domestic U.S. industry is in the national security, vital interests of this country." Daniel Yergin, *The Prize*, New York: Simon & Schuster, 1991, p. 756

[113] Edward L. Morse, "When it Comes to Dialogue, Small is Better," *Petroleum Intelligence Weekly*, May 27, 1991.

on domestic oil pricing or production, claimed that the elimination of controls had been a success. "The price of oil has fallen from the $36 a barrel of 1981 to about $12/ bbl today. The price of gas has also plummeted from an average of $1.25 a gallon when I took office to about 82 cents today," the president said.[114]

He noted that, while in 1981 the United States was consuming 17 million b/d of oil, six million b/d of which was imported, in April 1986 the nation was consuming less than 16 million b/d, with only four million of that volume consisting of imports. What was more significant, President Reagan suggested, was that the United States had changed the countries from which it was importing. "Back in 1981 most of it came from the OPEC countries, but now most of it comes from Canada, Mexico, the Caribbean, and Great Britain," the president said. Commenting on how the economies of the nation's oil-producing states were currently suffering from a "dramatic loss of income," President Reagan said that the answer was not a fee on imported oil, but rather "freeing up all remaining energy prices," thus decontrolling domestic natural gas.[115]

In 1985, President Reagan had helped pass FERC Order 436, which required gas pipelines to let producers sell directly to distribution companies and industrial customers. This effectively eliminated pipelines' monopoly power in markets and created competition for supplies at the wellhead. In July 1989, following the election of President Reagan's vice president, George H.W. Bush, to the presidency, lawmakers passed the Natural Gas Wellhead Decontrol Act of 1989. Natural gas prices stayed low into the 1990s as a bubble in supplies emerged. Natural gas' share of the U.S. electricity market rose from 10 percent in 1986 to 19 percent by 2008. Natural gas also replaced heating oil for residential use in many markets across the United States.

While it was unclear whether President Reagan's decontrol plans and global diplomacy were truly responsible for low oil prices—or whether the American leader was just lucky in his timing— his successor President George H.W. Bush did not immediately have OPEC to contend with as he took office. The memory of the 1973 oil embargo and gasoline station outages had faded from the forefront of American politics, and the Bush administration could focus on issues

[114]Ronald Reagan, "Radio Address to the Nation on Oil Prices," April 19, 1986, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=37156.
[115] Ibid.

other than oil for a period of time. Oil markets were generally oversupplied and oil prices remained relatively low during the late 1980s, despite the continuation of the Iraq-Iran war through 1988. From 1987 to 1990, Kuwait and other GCC members of OPEC "helped keep oil prices down by exceeding OPEC-assigned production quotas."[116] The low prices not only helped the U.S. and global economy, adding to demand for GCC oil, but also were thought to hurt the pocketbooks of Iran and Iraq, thereby containing their potential military threat within the greater Gulf region. However, this reprieve ended quickly when Iraq invaded Kuwait on August 2, 1990.

Within days, President George H.W. Bush had authorized the dispatch of American troops to Saudi Arabia as part of Operation Desert Shield. On August 6, the U.N. Security Council established strict economic sanctions on Iraq, effectively outlawing all Iraqi and Kuwaiti oil exports. Supplementing a request made in person by then-U.S. Defense Secretary Richard Cheney to allow U.S. troops in Saudi Arabia to ensure that Iraq did not continue to Saudi borders and to position the United States to repel the Iraqi invasion, the U.S. president sent a letter to King Fahd requesting that the kingdom increase its oil production to a maximum level to assure that the impact of the loss of Iraqi and Kuwaiti crude oil would be ameliorated.[117] King Fahd granted the request, and Saudi Arabia began investigating how much oil was needed in the market—and how quickly it could expand its output potential to meet this demand.[118]

Though world crude prices spiked during the weeks after Iraq's invasion of Kuwait, OPEC's decision on August 30, 1990, to temporarily forego quotas and bump output up by nearly four million b/d to make up for almost all of the exports lost by the embargo on Iraqi and Kuwaiti oil sales initially helped moderate prices. Saudi Arabia moved quickly to boost its output by 2 million b/d to 7.5 million b/d, and pledged to surpass 8 million b/d in September, while the U.A.E and Venezuela committed to each increasing production by 600,000 b/d and other

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[116] John Duke Anthony, "The U.S.-GCC Relationship: Is it a Glass Leaking or a Glass Filling," David W. Lesch, editor, *The Middle East and the United States: A Historical and Political Reassessment*, Boulder, Colorado: Westview Press, 1996, p. 365. The Iraq-Iran war hindered cohesion inside OPEC, contributing to overproduction by members. See "Oil Prices Climb Sharply; Corn and Soyybeans Plunge, *Associated Press*, August 9, 1988 http://www.nytimes.com/1988/08/09/business/futures-options-oil-prices-climb-sharply-corn-and-soybeans-plunge.html?scp=1&sq=August%201988,%20ceasefire,%20oil%20prices&st=cse.

[117] Amy Myers Jaffe and Jareer Elass, Saudi Aramco: National Flagship with Global Responsibilities, available at http://www.rice.edu/energy/publications/docs/NOCs/Papers/NOC_SaudiAramco_Jaffe-Elass-revised.pdf.

[118] "Saudis Speed Up Work to Expand Crude Oil Potential," *Petroleum Intelligence Weekly*, October 8, 1990; and "Capacity Ample to Replace Loss if Producers Move," *Petroleum Intelligence Weekly*, August 13, 1980.

members pledging to do their part.[119] In coordination with that response, U.S. Secretary of Energy James Watkins ordered a 5 million barrel test sale of the SPR to "demonstrate readiness of the system under real life conditions."[120] Crude prices declined just shy of $5/bbl to $25.92/bbl as it became clear that OPEC would be increasing its output.

In an address before a joint session of Congress on September 11, 1990, President George H.W. Bush noted that, while oil producing nations had already moved to replace half of the lost Iraqi and Kuwaiti oil production, it was incumbent upon oil-producing nations—including the United States—to continue steps to expand oil and gas production to stabilize prices and guarantee against hardship. The American leader pointed out that the United States and several of its allies could ultimately turn to the country's SPR if deemed necessary. While stressing how critical conservation efforts are to keeping energy needs as low as possible, President George H.W. Bush pointed out that: "…we must then take advantage of our energy sources across the board: coal, natural gas, hydro, and nuclear. Our failure to do these things has made us more dependent on foreign oil than ever before."[121]

In addition, the president called on Congress to immediately pass measures to enhance domestic energy output and energy conservation as a means to cut dependence on foreign oil imports. According to the president, "These measures should include my proposals to increase incentives for domestic oil and gas exploration, fuel-switching, and to accelerate the development of the Alaskan energy resources without damage to wildlife." The president stated that while U.S. oil imports totaled nearly six million b/d when the oil embargo was imposed in the early 1970s, U.S. oil imports had risen to nearly eight million b/d before the Iraqi invasion of Kuwait.[122] But by early November 1991, the U.S. Senate had shot down an energy bill backed by the Bush administration that would have opened one-and-half million acres of the Arctic National Wildlife

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[119] Youssef M. Ibrahim ,"OPEC to Increase Oil Output to Offset Losses from Iraq; No U.S. Hostages Released," *The New York Times*, August 30, 1990, http://www.nytimes.com/1990/08/30/business/opec-to-increase-oil-output-to-offset-losses-from-iraq-no-us-hostages-released.html?scp=2&sq=OPEC%20and%20August%201990&st=cse&pagewanted=2.

[120] http://www.fossil.energy.giv/programs/reserves/apr/apr3304_history_of_releases.pdf.

[121] George H.W. Bush, "Address Before a Joint Session of the Congress on the Persian Gulf Crisis and the Federal Budget Deficit," September 11, 1990, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=18820&st=&st1.

[122] Ibid.

Refuge (ANWR) in Alaska to oil drilling. Although the recent conflict in the Gulf had fostered the legislation, stable oil prices and abundant oil supplies helped scupper the bill.[123]

On November 28, 1990, the U.N. Security Council adopted Resolution No. 678, effectively giving the Bush administration the go-ahead to employ military force against Iraq should Baghdad not withdraw from Kuwait by January 15, 1991.[124] As the world prepared for a U.S.-led invasion into Iraq in mid-January, OPEC ministers met quickly on December 12, deciding there was no reason to restore quotas during the length of the current crisis with Iraq. The group also reiterated its determination to return to a post-crisis $21 a barrel reference price and 22.5 million b/d production ceiling set in July. Yet, it was evident that price hawks, like Iran, Algeria, and Libya would be happy with production levels that would maintain prices above $21/bbl following a resolution to the Gulf crisis, while Saudi Arabia and its OPEC allies—mindful of the lesson learned in the previous months that high prices contribute to a weakening of oil demand—preferred a more moderate price that would sustain demand growth.[125]

Following a breakdown of peace talks in Geneva between U.S. Secretary of State James Baker and Iraqi Foreign Minister Tariq Aziz, the U.S. House of Representatives and Senate both voted to authorize President George H.W. Bush on January 12, 1991, to use military force against Iraq. With the passing of the January 15 deadline, U.S. and Allied forces launched Desert Storm on January 17, 2:45 a.m. Baghdad time, beginning their intensive air campaign against Iraq with no damage or retaliation against Saudi oil fields.[126]

Within hours of the first air strike against Iraq, the Bush administration announced its authorization for Secretary of Energy Watkins to initiate a 33.75 million barrel drawdown of the country's SPR and the IEA activated a plan on January 17. To ensure the widest possible transportation options for the emergency sale, the president also directed the Secretary of Treasury to waive provisions of the Jones Act that require the use to U.S. flaged-ships to transport crude oil from the SPR. The following day oil prices dropped more than $10/bbl to

[123] Clifford Krauss, "Energy Bill Is Derailed In Senate," *The New York Times*, November 2, 1991, http://www.nytimes.com/1991/11/02/business/energy-bill-is-derailed-in-senate.html?scp=7&sq=November%201991%20and%20OPEC&st=cse.
[124] United Nations Security Council web site http://www.un.org/Docs/scres/1990/scres90.htm.
[125] "Opec Members Delay Decisions Amid Ominous Signs," *Petroleum Intelligence Weekly*, December 17, 1990.
[126] "President George Bush Announcing War Against Iraq," The History Place, http://www.historyplace.com/speeches/bush-war.htm.

$21.44/bbl, the single largest price drop to date at that time, and prices remained around $20/bbl for the duration and into the aftermath of the war. By the time companies submitted bids to buy SPR crude on January 28, the chances of market instability had receded almost completely. The DOE accepted 13 offers two days later, accounting for 17.3 million barrels of the total volume of oil tendered. The total drawdown of SPR oil during Desert Storm was roughly half of what the U.S. government had put on offer, because the bids by the companies for lower quality sour crude were considered too low. Watkins announced that the DOE would only accept bids that were above 97.5 percent of benchmark prices of comparable crudes. On February 5, the first crude supplies from the SPR sale were delivered and the DOE completed its contractual obligations from the sale on April 3.[127] Desert Storm effectively ended on February 28, with the cessation of hostilities declared. Baghdad subsequently accepted cease-fire terms on April 6, with the cease-fire going into effect on April 11.[128] In wrapping up the first-ever official emergency drawdown of the SPR, Watkins stated, “We have sent an important message to the American people that their $20 billion investment in emergency supply of crude oil has produced a system that can respond rapidly and effectively to the threat of an energy disruption.”[129]

The SPR sale certainly helped mitigate any price spikes during Desert Storm, but OPEC producers also played a large role in providing price stability during that period. Throughout the month of February 1991, OPEC members kept their output at just shy of 23 million b/d, about 2 million b/d above expected second quarter demand, and a tad below January output. This accomplishment occurred despite the temporary loss of a further 340,000 b/d of production from the Kuwaiti-Saudi neutral zone during the early days of the war. Saudi Arabia was able to produce 8.2 million b/d, while Iran increased back-up by 100,000 b/d and Abu Dhabi exceeded 2 million b/d of production.[130]

As he was running for re-election in 1992, President George H.W. Bush returned to energy issues and tried to fashion new legislation that would shore up his electoral popularity in key oil states. The legislation was to include an amendment to the alternative minimum tax and

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[127] “Releasing Crude Oil from the Strategic Petroleum Reserve,” U.S. Department of Energy, http://fossil.energy.gov/programs/reserves/spr/spr-drawdown.html.
[128] U.S. Department of Defense, “The Operation Desert Shield/Desert Storm Timeline,” August 8, 2000, http://www.defenselink.mil/news/newsarticle.aspx?id=45404.
[129] http://www.fossil.energy.giv/programs/reserves/apr/apr3304_history_of_releases.pdf.
[130] “Opec Eyes Hard Job of Allotting Quotas As Glut Looms, *Petroleum Intelligence Weekly*, March 4, 1991.

graduated royalty tax rates for stripper wells on federal lands. The changes in the alternative minimum tax (AMT) rules would partly correct a climate in which taxes climb in conjunction with declining output, and new domestic exploration activity is discouraged.[131]

On Oct. 24, 1992, the president signed into law the Energy Policy Act of 1992. Highlighting key points of the legislation in a statement on the same day, he extolled the "landmark provision furthering competition in the way electricity is generated and sold, thus lowering prices while ensuring adequate supplies." The president also remarked on licensing reforms that would make nuclear power more viable in the future and stressed that "provisions to encourage the development and use of clean burning alternative fuels" would cause the nation's near total dependence on petroleum to decline.[132]

In the final days of the 1992 U.S. presidential election campaign, as it became likely that Arkansas Governor Bill Clinton would assume the presidency in January 1993, the buzz in the domestic oil industry was that a Clinton administration would look askance at growing oil imports, however cheap, and instead favor natural gas, clean air, and boosting jobs in the domestic energy industry. Despite the fact that low oil prices had kept inflation down, the Clinton team believed that the true cost of imported oil had been extremely high in recent years. While likely to strictly enforce, if not tighten existing fuel quality and plant emission standards and ensure that drilling in ANWR and large portions of the Outer Continental Shelf (OCS) would still be off limits, a Clinton administration was expected to support the U.S. upstream industry in other ways and try to redirect the flow of U.S. investment dollars overseas.[133]

In his first State of the Union address on February 18, 1993, newly-elected President Bill Clinton introduced a number of tax increase proposals, one of the most controversial being an energy tax—referred to as a modified Btu tax—which would tax all fuels based on their energy content, according to British thermal units (Btu). According to the Clinton proposal, natural gas, coal, and nuclear power would be taxed at one rate, and oil at a rate more than double, raising an estimated

[131] "Presidential Politics Could Pay Off For US Oil Patch," *Petroleum Intelligence Weekly*, March 2, 1992.
[132] George H.W. Bush, "Statement on Signing the Energy Policy Act of 1992," October 24, 1992, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=21653.
[133] "Count on Clinton To Seek Squeeze On US Oil Imports," *Petroleum Intelligence Weekly*, October 26, 1992.

$71 billion over five years.[134] However, the concept of the Btu tax died four months later—despite having been included in legislation passed by the House—when the Clinton administration was caught off guard by extensive lobbying from the business community and opposition from the American public over fears of increases in heating and transportation costs as well as from within the Congress.[135] Ultimately, the legislation passed by Congress in August 1993 contained a tax of 4.3 cents a gallon on transportation fuels.

OPEC disarray in the early years of the Clinton White House took oil prices off the front burner in the United States again for several years. Ironically, the Clinton administration's first tangle with OPEC came not from concerns that the cartel would restrict oil output and hurt the U.S. economy, but from fears that sharply falling oil prices might harm important U.S. allies such as Mexico. As oil prices fell to under $10/bbl in the wake of the Asian financial crisis of 1998, Energy Secretary Bill Richardson during a visit to Riyadh—which was ostensibly scheduled to discuss American oil firms participating in the potential upstream opening in Saudi Arabia that had been broached to U.S. oil firms by then-Crown Prince Abdullah in late 1998—reportedly raised the administration's concerns about market oversupply and extreme price volatility with Saudi leadership. At a joint news conference with Richardson, Saudi Oil Minister Naimi said oil markets were oversupplied and that the kingdom promised to take steps to avoid harming the global economy. Former Saudi Oil Minister Yamani, speaking in Houston in the fall of 1999, told an audience that Richardson had "saved the oil industry" through his discussions with Naimi and the Saudi leadership, as the secretary had "persuaded" the kingdom into changing policy to help lift prices.[136] The Saudis did not appear to require much of a push to want to restore prices, with the kingdom reportedly set on re-capturing a WTI price of $18-20/bbl as quickly as possible.[137]

OPEC's turnaround March 1998 agreement mandated 1.485 million b/d in cuts, with pledged contributions also from non-OPEC producers Mexico, Russia, and Oman. The 1998 plan was

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[134] Ruth Marcus and Ann Devroy, "Asking Americans to 'Face Facts,' Clinton Presents Plan to Raise Taxes, Cut Deficit," *The Washington Post*, February 18, 1993, http://www.washingtonpost.com/wp-srv/politics/special/states/stories/sou021893.htm.

[135] "A Gas Tax Isn't Broad Enough," *The New York Times*, June 11, 1993 http://www.nytimes.com/1993/06/11/opinion/a-gas-tax-isn-t-broad-enough.html.

[136] Andrew Hamilton, "How the White House Helped Pump Up The Price," *The Washington Post*, April 30, 2000..

[137] "Saudis Leave No Doubt: $18-$20 Oil Is The Goal," *Petroleum Intelligence Weekly*, March 22, 1999.

designed to create a floor under world oil prices.[138] Following the implementation of the March 1998 plan, OPEC continued to demonstrate unity to address any rise in global oil inventories that might threaten the rebound in prices. The cuts implemented over the summer of 1998 brought global supply to levels well below world demand, forcing market players to drawdown bulging inventories that had been overhanging the market and pressuring prices. By September, OPEC could boast 81 percent compliance with production quota allocations, an uncharacteristically high level for the producer organization.[139] The success reinvigorated OPEC and, by March 1999, the producer group adopted another set of agreements that triggered continued price rallies. By the spring of 2000, ambitious OPEC members such as Venezuela and Iran began pressing for a framework to adjust output regularly to ensure that the OPEC basket price remained between $22 and $28/bbl. Behind the scenes, Secretary of Energy Richardson pressed U.S.-friendly OPEC members to raise output to keep oil prices closer to the $20-to-$25 end of the spectrum. On March 23, 1999, the kingdom accepted an eight percent reduction in its OPEC quota for a new allocation of 7.438 million b/d, facilitating a new OPEC agreement to cut production by a total of 1.7 million b/d.[140]

The OPEC cuts came on the back of U.S. plans to resume filling the nation's SPR with around 28 million barrels of federal royalty oil from production in the Central Gulf of Mexico. The initiative—carried out jointly by the Departments of Energy and the Interior—was originally designed to replace oil that had been sold in 1996 and 1997 as part of the Clinton administration's move to reduce the federal budget deficit. From 1999 through December 2009, the SPR accepted royalty-in-kind transfers of crude oil as a primary means of taking in oil for the SPR, effectively taking oil off the market while prices were low.[141]

Global crude prices began to climb in the spring of 1999, in great part due to the dedicated cuts from OPEC. By July, oil prices had risen to a 19-month high of $19.78, the highest price since November 1997, on indications that OPEC was determined to hold to its supply reductions. As OPEC enjoyed recovered oil prices in the winter of 1999, Saudi Arabia was becoming concerned

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[138] *Petroleum Intelligence Weekly,* March 30, 1998, 1.
[139] *Petroleum Intelligence Weekly,* September 14, 1998, 1.
[140] James Richard, "New Cohesion In OPEC's Cartel?: Pricing and Politics," *The Middle East Review of International Affairs* 3, no.2 (June 1999), http://www.gloria-center.org/meria/1999/06/richard.html.
[141] U.S. Department of Energy, "Filling the Strategic Petroleum Reserve-Direct Purchases, RIK, and Exchanges," http://fossil.energy.gov/programs/reserves/spr/spr-fill.html.

that the stock overhang might be eliminated in the first quarter of 2000 and cause a price spike unless OPEC increased its output. This opinion, however, was contrary to that of Iran and others, who contended that output constraint might be required through at least the first quarter of 2000 and believed that extending the cuts agreed upon in 1998 and 1999 until June 2000 was a better alternative.[142] Crude prices rose 85 cents to $26.66 a barrel on December 7, 1999, when Saudi Arabia announced that OPEC would not increase its output levels until the group next met in March 2000.[143]

In late January 2000, the Clinton administration responded to high oil prices and escalating product prices by temporarily stopping oil purchases for the SPR and approving the early release of $45 million worth of federal money to state governments to subsidize heating bills for poor families. The administration also recommended that Congress appropriate an additional $154 million in 2001 to help poor households better insulate their homes. Energy Secretary Richardson had received repeated requests from U.S. Senator Chuck Schumer, D-N.Y., and other Northeastern senators to tap into the SPR in order to alleviate high heating oil costs that were hitting the Northeast hard that winter, but the Clinton administration was reluctant to take that step.[144]

The administration did, however, make a misstep in attempting to sway OPEC to raise output when the ministers were actually in the throes of their March 2000 meeting, feeding into Iran's contention that Washington was unduly influencing other members of the group, namely Saudi Arabia. In what was perceived as incredible arrogance by the Iranians and other delegations, Energy Secretary Richardson phoned OPEC president and Qatari Oil Minister Abdullah Al-Attiyah on March 27 as he was hosting a meeting of all 11 OPEC ministers to try to pressure the group to raise output levels to help drive down prices. Washington was hoping to see crude and product prices fall before the United States faced higher gasoline consumption in the coming peak driving months. The U.S.' heavy-handed approach was said to be part of Iran's resistance to

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[142] "OPEC Still Talks Cuts But Saudis Fear Price Spike," *Petroleum Intelligence Weekly*, November 15, 1999.
[143] The Markets: Commodities: "Crude Oil Rises," *The New York Times*, December 7, 1999, http://www.nytimes.com/1999/12/07/business/the-markets-commodities.html?scp=6&sq=OPEC%20and%20December%201999&st=cse.
[144] Keith Bradsher, "Consumers Hit as Fuel Prices Climb Sharply," *The New York Times*, January 30, 2000, http://www.nytimes.com/2000/01/30/business/consumers-hit-as-fuel-prices-climb-sharply.html?scp=18&sq=oil%20and%20January%202000&st=cse.

the group increasing output and its unwillingness to go along with the agreement. Although the group had wanted to boost output by 1.713 million b/d—effectively negating the cuts made in March 1999—nine OPEC ministers signed an accord to raise their output by 1.452 million b/d, with Iran and Iraq not being party to the agreement. Iran did subsequently say that it would raise output by an unspecified amount.[145]

A week before OPEC was to meet again on June 21, 2000, a Saudi official suggested that with crude prices at around $32/bbl, the kingdom would support an output increase. OPEC had pledged at its previous gathering that the group would boost its production by 500,000 b/d when a 20-day moving average of oil prices shifted out of a $22-to-$28 price band, but the organization had yet to take action.[146] At its June session, the ministers agreed to raise its ceiling by 708,000 b/d for a new OPEC ceiling of 25.4 million b/d (minus Iraq), but the markets shrugged off the news, with the price for WTI closing up on June 22 at $32.19. On July 3, Naimi stated that Saudi Arabia was prepared to immediately pump an additional 500,000 b/d if prices remained above the OPEC price band of $22-$28 a barrel.[147]

Even though the Clinton administration had established a Northeast Heating Oil Reserve in the summer of 2000, the administration was reportedly concerned about low distillate inventories in the Northeast in the fall of 2000. As oil prices started to approach $40/bbl, President Clinton on September 22 authorized his energy secretary to initiate a time exchange agreement or "swap" with oil companies for as much as 30 million barrels of SPR crude, signaling the market that the administration had an upper price band that it would resist.[148]

The Clinton administration's SPR move was seen by many as more of a political move than one grounded in necessity. Indeed, the announcement of the swap came one day after a call for a release of SPR barrels by Democratic presidential candidate, Vice President Al Gore. The vice president had proposed that batches of five million barrels be released to help rebuild private oil

[145] "OPEC's Feathers are Ruffled," *BusinessWeek*, March 30, 2000, http://www.businessweek.com/bwdaily/dnflash/mar2000/nf00330f.htm.
[146] Stanley Reed, "OPEC's Inaction Shows The Cartel Is No Central Bank," *BusinessWeek*, June 13, 2000, http://www.businessweek.com/bwdaily/dnflash/june2000/nf00613j.htm.
[147] "Gas & Oil Prices: A Chronology," *NPR Online*, http://www.npr.org/news/specials/oil/gasprices.chronology.html#JUL00.
[148] U.S. Department of Energy, "Releasing Crude Oil From The Strategic Petroleum Reserve," http://www.fossil.energy.gov/programs/reserves/spr/spr-drawdown.html.

inventories, which were near 24-year lows.[149] With refineries running at full capacity, the excess crude did little to lower heating oil prices. It was the shortage of heating oil, not crude, that was the problem. The White House acknowledged that only about 40 percent of the released oil would eventually be converted to heating oil.[150] Texas Governor George W. Bush, the Republican presidential candidate and the son of President George H.W. Bush, responded negatively to the SPR swap, stating that the nation's oil reserve is "meant for a national emergency, a national war, a major disruption of supply," and not to influence the market. Saudi Arabia was equally unhappy with the Clinton administration's announcement, calling it "an election ploy requested by Al Gore."[151] But the move also constrained market speculators and OPEC by signaling that the Clinton administration would use such sales from the U.S. strategic petroleum reserve to calm oil markets and discourage speculative activity during a sudden disruption or severe imbalance of markets. The strategy proved similarly successful, discouraging future markets players from holding long positions above the $39/bbl level for fear that U.S. government intervention in the market could cause them losses.

On the campaign trail in June 2000, Texas Governor George W. Bush boasted that, "I would work with our friends in OPEC to convince them to open up the spigot, to increase the supply … Use the capital that my administration will earn, with the Kuwaitis or the Saudis, and convince them to open up the spigot." Candidate Bush, who would go on to become the next U.S. president, emphasized that because the United States had "helped" the Saudis and Kuwaitis out during the Gulf War in 1991 "…you'd think we'd have the capital necessary to convince them to increase the crude supplies."[152]

As President George W. Bush began Operation Iraqi Freedom on March 19, 2003, his predictions that the United States could count on support from the Arab Gulf proved correct. Kuwait quietly provided fuel for the military operation and, while Saudi Arabia publicly distanced itself from the U.S.-led initiative, its oil policy was supportive. The kingdom increased

[149] "U.S. Taps Oil Reserve," *CNN Money*, September 22, 2000, http://money.cnn.com/2000/09/22/news/oil_spr/.
[150] Timothy J. Considine and Kevin M. Dowd, "A Superfluous Petroleum Reserve?" The Cato Institute, Summer 2005, http://www.cato.org/pubs/regulation/regv28n2/v28n2-3.pdf.
[151] "U.S. Taps Oil Reserve," *CNN Money*, September 22, 2000, http://money.cnn.com/2000/09/22/news/oil_spr/.
[152] Katharine Q. Seelye, "Bush Would Use Power of Persuasion to Raise Oil Supply," *The New York Times*, June 28, 2000, http://www.nytimes.com/library/politics/camp/062800wh-bush.html.

its sales both to the United States and elsewhere in early 2003 as the Saudis sought to stabilize markets ahead of the war and cope with other supply disruptions. Thus, initially, President George W. Bush received high cooperation from Saudi Arabia and, through its leadership, OPEC.

Indeed, prior to the invasion and as Washington edged closer to military conflict with Iraq, both the George W. Bush administration and the IEA sounded out key OPEC members on the group's ability to ensure market stability. It was agreed that OPEC would first move to calm any market disruptions before Western nations tapped their strategic reserves. Specifically, IEA Executive Director Claude Mandil met with Saudi Oil Minister Naimi in Riyadh on March 5, with the two accepting that oil from government-held reserves should only be released after producers had been given an opportunity to address a supply shortfall. After a meeting with the Saudi oil delegation in Vienna on March 11, U.S. Energy Secretary Spencer Abraham said he viewed OPEC's commitment to supply the market as a positive one, adding: "We view the reserves as a backstop, an emergency capability to deal with severe supply disruptions."[153] Energy Secretary Abraham reportedly became the first Cabinet member in U.S. history to be on the sidelines of an OPEC meeting, although the official line was that he was in Vienna for a two-day meeting of the IAE.[154]

On March 18, 2003, Saudi Arabia made it publicly known that it had spent three months stockpiling almost 50 million barrels of oil—mostly in the kingdom—to help calm the markets in the event of an expected U.S. war on Iraq that would result in the loss of as much as 1.5 million b/d of Iraqi crude. Naimi, in a statement, said, "We will make sure there is enough oil in the market. We have plenty of spare capacity." Although Saudi Arabia wanted to assure its critics that the Bush administration had not put pressure on the kingdom to build the reserve, Saudi oil officials had not only been consulting with the administration's National Security Council but one Saudi representative reportedly also briefed members of Congress about the reserve.[155]

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[153] Walid Khadduri and Bill Farren-Price "OPEC Stresses Commitment To Supply, Watches Developments,",*Middle East Economic Survey*, March 17, 2003, http://www.mees.com/postedarticles/finance/OPEC/a46n11a01.htm.

[154] Timothy Noah, "Spencer Abraham Joins OPEC," *Slate*, March 13, 2003, http://www.slate.com/id/2080118/.

[155] Neela Banerjee, "Saudis Stock Oil Reserve To Make Up For Iraq Loss," *The New York Times*, March 18, 2003, http://www.nytimes.com/2003/03/18/business/commodities-saudis-stock-oil-reserve-to-make-up-for-iraq-loss.html?scp=5&sq=OPEC%20and%20March%202003&st=cse.

When the United States launched its war on Iraq on March 19, 2003, crude prices subsequently declined from the heights of near-$40/bbl to $30/bbl on the assumption of a short U.S. campaign against the regime of Iraqi President Saddam President.[156] OPEC was successful in offsetting much of the lost Iraqi production in April through increased output mainly from Saudi Arabia—which had raised its output levels by some 250,000 b/d to 9.5 million b/d—and Kuwait—which added more than 150,000 b/d to reach 3.239 million b/d that month.[157] At a one-day conference in late April, OPEC once again stymied markets as it previously did in December 2002 by raising official quotas by 900,000 b/d to 25.4 million b/d while at the same time suggesting that, if all of the OPEC members excluding Iraq adhered to their new quotas, actual output from the group would fall by around 2 million b/d. The group had estimated that it had been pumping as much as 27.4 million b/d of oil into the markets, largely to counter the impact of the U.S. war on Iraq and lost output from Nigeria.[158] In the first half of 2003, Saudi crude oil shipments to the United States were particularly high as the kingdom moved to replace lost supplies resulting from civil unrest in Nigeria and cutbacks in Iraqi oil production due to the onset of Operation Iraqi Freedom.

But the early positive geopolitical circumstances between this administration and its allies in the Persian Gulf were not sustained. In the later years of the George W. Bush White House, the president was repeatedly rebuffed by OPEC when he called on the group to increase its supply levels. By early 2004, OPEC, including Saudi Arabia, was endorsing production cuts even though prices were above $35 a barrel. By October 2004, U.S. oil prices had hit a record at $55 a barrel as hurricanes pummeled oil production platforms in the U.S. Gulf of Mexico and OPEC was left producing flat out with little dampening effect on markets. By year's end, OPEC's shifting attitudes toward its old price targets became apparent, as the organization agreed to institute new counter-seasonal production cuts during the high winter demand period, effectively defending prices above $40. The decision came against the backdrop of a terrorist attack on U.S. targets inside Saudi Arabia and rising revenue needs against a weakening dollar. In explaining its decisions to defend prices well above its $22-to-$28/bbl price band, OPEC explained that in real

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[156] Wilfrid L. Kohl, "The perfect storm: OPEC and the world market," *Harvard International Review*, January 1, 2005, http://www.allbusiness.com/public-administration/national-security-international/344476-1.html.
[157] April Oil Flows Hold Up Well Despite War," *Petroleum Intelligence Weekly*, May 12, 2003.
[158] "OPEC Again Opts for Choreographed Confusion," *Petroleum Intelligence Weekly*, April 28, 2003.

terms, after adjustments for inflations and the accelerated depreciation of the dollar, the OPEC basket price of oil reflected its $22-to-$28/bbl target price in purchasing power parity terms.[159]

In his January 23, 2007, State of the Union address, President George W. Bush's anti-OPEC rhetoric escalated and he stated that the U.S.' long dependence on foreign oil "leaves us more vulnerable to hostile regimes and to terrorists who could cause huge disruptions of oil shipments and raise the price of oil and do great harm to our economy." Stressing the need for energy diversity, the president proposed the goal of reducing domestic gasoline use by 20 percent in the next 10 years, in part by boosting the supply of alternative fuels by setting a mandatory fuels standard to require 35 billion gallons of renewable and alternative fuels in 2017. That would be nearly five times the current target, President Bush said.

In addition, "…to further protect America against severe disruptions to our oil supply," the president called on Congress to double the current capacity of the SPR.[160] In doubling the reserve from 727 million barrels to 1.5 billion barrels by 2027, the White House noted this step would give U.S. consumers some 97 days worth of imports to help protect the world's largest oil-consuming nation from global price shocks. Energy Secretary Samuel Bodman had previously said the government would start the process by purchasing about 11 million barrels of replacement crude in the coming spring, adding oil at a rate of about 100,000 b/d. The government would fund the purchase with the $600 million that was raised when it sold 11 million barrels of reserve oil to U.S. refiners in the aftermath of Hurricane Katrina.[161]

The president visited Riyadh in late January 2008 to discuss a range of issues including American concern over the declining world economy and elevated energy prices. Still, Saudi Arabia did not respond by orchestrating an OPEC production increase. When OPEC met the following month, the group voted to keep its production levels unchanged. In March 2008, following yet another call by the White House for OPEC to open up its taps, the group again decided not to alter its supplies, prompting President George W. Bush to respond to those actions

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[159] "OPEC Talks Dollar, Market Ahead of Meeting," *Oil Daily*, November 30, 2004.
[160] George W. Bush, "Address Before a Joint Session of Congress on the State of the Union," January 23, 2007, transcript, The American Presidency Project, http://www.presidency.ucsb.edu/ws/index.php?pid=24446.
[161] Chris Baltimore and Tom Dogget , "Bush wants to double U.S. emergency oil stockpile," *Reuters*, January 23, 2007, http://www.reuters.com/article/idUSN2328108920070124.

by stating , “I think it’s a mistake to have your biggest customer’s economy to slow down” because of high energy prices.[162]

Ironically, the president, speaking at a renewable fuels conference in March 2008, reiterated the message of many past presidents since Richard Nixon that the U.S. should end dependency on foreign oil supplies. No longer able to say America could rely on its allies in the Persian Gulf, the president noted that “America’s got to change its habits; we’ve got to get off oil. Until we change our habits, there’s going to be more dependency on oil.”[163]

Facing a national average gasoline price of $3.73 a gallon and crude prices topping $125/bbl, the White House came under increasing fire on the subject of energy policy. Democrats jumped on the fact that, even as oil prices continued to soar, the administration would not cease its filling of the SPR. The stockpiling, while small, still at the very margins tightened markets. China was simultaneously filling its new strategic reserve, again aggravating already tight oil markets.

Contrary to advice from the White House, the newly Democratic U.S. Senate voted on May 13, 2008, to suspend deliveries of crude oil into the SPR until crude prices fell below $75/bbl, with both Republicans and Democrats arguing that removing oil from the market through the reserve deliveries further tightened supplies and contributed to sky-high gasoline prices.[164] Although President George W. Bush had been strongly opposed to putting a temporary halt to filling the SPR, the DOE announced three days after the Senate vote that it was dropping plans to sign contracts with energy companies to deliver up to 13 million barrels of crude into the reserve, and that it would not enter the market to purchase as much as $584 million worth of crude to fill the SPR if the legislation became law. At the time that the DOE announced the halt on adding to the reserve, the SPR was 97 percent full, containing nearly 703 million barrels of crude.[165]

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[162] Jad Mouawad, “President Fails to Budge OPEC on Production,” *The New York Times*, March 6, 2008, http://www.nytimes.com/2008/03/06/business/worldbusiness/06oil.html?pagewanted=1&_r=2&hp
[163] Jad Mouawad , “President Fails to Budge OPEC on Production,” *The New York Times*, March 6, 2008, http://www.nytimes.com/2008/03/06/business/worldbusiness/06oil.html?pagewanted=1&_r=2&hp.
[164] Robert Dillon , “Senate Sends Signal to Bush to Stop Filling Strategic Reserve,” *The Oil Daily*, May 14, 2008.
[165] “US Stops Adding Oil to Strategic Reserve,” *The Oil Daily*, May 19, 2008.

The DOE's announcement about temporarily stopping the flow of oil into the SPR came on the same day that the president was again rebuffed by Saudi Arabia over a call for greater oil volumes during the American leader's second visit to the kingdom within five months. While the Saudis did say that they had decided the previous week to add 300,000 b/d of output into the markets, the White House insisted that this amount would not be enough to help bring down U.S. gasoline prices that were nearing $4 a gallon. Minister Naimi stated that the extra barrels had been agreed upon on May 10, and had nothing to do with the president's request, but rather were the result of requests from Saudi customers, mostly in the United States. The Saudi oil minister again argued, "supply and demand are in balance today."[166] But ultimately, prices would climb to $147/bbl, until recession fears, banking failures, and slowing worldwide demand caused a sudden collapse in prices in mid-2008.

The Bush administration, unlike the Nixon administration and its petrodollar strategy by Henry Kissinger before it, failed to recognize that the sudden transfers of massive oil receipts to and from the Middle East—historically known as "petrodollar recycling"—were in 2006 to 2008 becoming critically destabilizing. The unanticipated petrodollar flows fueled financial and asset bubbles, and undermined the global economy through speculative oil-price feedback bubbles.[167] The oil producing countries' economies were too shallow to absorb the sudden influx of petrodollar inflows, creating regional bubbles in real estate and stock markets, which then in turn spilled over into the international financial system, contributing to credit bubbles and eventual crashes (as seen in Latin America in 1980s, and then worldwide in 2007-2008).

The 2003-2008 massive petrodollar outflow dangerously mixed with the ample liquidity provided by low interest rates and a growing unregulated appetite for credit risk in financial markets, prompting inflated prices in real estate, credit derivatives, and ultimately a self-perpetuating rise in commodity prices. These overinflated financial products distorted incentives toward the financial sector and away from other industry investment that is more conducive to long-term economic growth. With the globalized international financial market contagion, the

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[166] Sheryl Gay Stolberg and Jad Mouawad, "Saudis Rebuff Bush, Politely, on Pumping More Oil," *The New York Times*, May 17, 2008, http://www.nytimes.com/2008/05/17/world/middleeast/17prexy.html.
[167] For a longer discussion of this phenomenon, see Mahmoud El-Gamal and Amy Myers Jaffe, *Oil, Dollars, Debt and Crises The Global Curse of Black Gold* (London: Cambridge University Press, 2010).

crisis grew to epic proportions. At that point, the George W. Bush administration did seek the assistance of key Arab oil producing states, which stepped into the market to bail out major financial institutions such as Citibank, N.A., and Merrill Lynch & Co., Inc., and took a constructive and coordinated approach to the welfare of the U.S. dollar.

The key lesson from the 2007-2008 crisis should be that the financial problems associated with an oil shortage mean squarely that America cannot solve its problems via "energy independence." In a globalized financial setting, all countries with relatively open economies and limited capital controls are exposed to the same asset and financial bubble risks, including those that might achieve self-sufficiency in their consumption of domestic fuels. Global oil dependence creates global exposure to extreme financial market risks through the mechanism of petrodollar recycling, which transmits financial market shocks to all concerned.

Conclusion

U.S.-OPEC relations have faced great ups and downs over the last three decades, and there are lessons in these experiences for both the United States and the oil producer group. Clearly, competitive strategies where oil producers seek high oil prices and consuming countries low oil prices have been not just zero sum, but ultimately negative for all concerned and the global economy.

Shifting geopolitical circumstances have made it difficult over the years for the United States to maintain win-win scenarios where it has weathered energy market crises by close collaboration with key OPEC members. The result has been a repetition of boom-bust cycles that have damaged economic growth not just in the United States, but over the long run, in the Middle East as well.

The history of U.S.-OPEC relations holds many lessons on how best U.S. administrations should manage the existence of an oil cartel in global energy markets. Clearly, history shows that signaling and following through on a willingness to release strategic emergency oil stockpiles like the U.S. SPR is a critical tool in managing oil market expectations and promoting OPEC cooperation on acceptable price ceilings. Each U.S. president upon coming to office should make his administration's SPR policy publicly known and clear, something the Obama administration has not pursued and needs to consider.

In particular, a planned release of government-controlled strategic stockpiling systems, especially when used in combination with production increases from important global oil producers who maintain spare oil production capacity (such as Saudi Arabia, the United Arab Emirates and Kuwait), can serve an important role in limiting the power of speculators in the global oil market during times of crisis or significant oil supply-demand imbalances. Such planned releases of extra oil can ensure that shortages do not create major economic damage and discourage producers from exacerbating accidental or cyclical supply interruptions through planned manipulation of market supply. During the downward cycle, consuming countries can restock strategic reserves to help producers stabilize oil revenue. However, use of these tools has been spotty at best.

The experience of 1990-1991 demonstrated the clear benefit of coordinated use of strategic stocks and producer spare capacity in contrast to the kind of unfettered, dislocating responses experienced in 2007-2008. In the mid-1990s, the Clinton administration also used sales from the SPR (through the SPR exchange mechanism) to cap oil prices at $40/bbl, sending a signal to oil markets and OPEC that the U.S. government would act to calm oil markets and discourage speculative activity during a sudden disruption or severe imbalance of markets.

In 2007-2008, by contrast, governments around the world, including the United States under the George W. Bush administration, engaged in building strategic stockpiles as oil prices rose from $65/bbl to $125/bbl. This policy signaled to oil markets participants and OPEC that governments would not use strategic petroleum stocks to ease prices under any circumstances except major wartime supply shortfalls. This allowed speculators to confidently expand their exposure in oil market futures exchanges without fear of repercussions and revenue losses from a surprise release of U.S. or IEA strategic oil stocks.

Another lesson from history is that global diplomacy, along with strong U.S. leadership, is a necessary component needed to discourage OPEC from seeking investment or market supply policies that will produce long-term damage to the global economy and stability of the financial system. During the administration of President Ford, the United States used effective international diplomacy to influence OPEC to adopt more constructive policies toward global oil markets. Today, multilateral monitoring through the G-20, the International Monetary Fund, and other bodies promoting greater dialogue between Asian and oil-exporting creditor nations and the West, could serve to pull the United States and OPEC out of counterproductive short-term strategies on oil policy to the detriment of the global system. Counter-cyclical investment, including by the very sovereign wealth funds who gain massive revenues when prices are rising, could serve as a cornerstone to market stability.

While consuming countries have generally focused on managing oil demand by reducing the oil intensity of their economies through investments in alternative energy and mandating more efficient technology for fuel consumption, consuming countries have done little to try to promote investment in future energy supply by producers. No emphasis has been placed on discussion in existing and emerging bilateral and multilateral trade institutions or the G-20 to ensure that there is sufficient investment to meet global demand in the years and decades ahead.

Trade in energy goods, while technically covered by the World Trade Organization (WTO) rules, is not being discussed in any significant diplomatic manner to proactively create a policy that would better manage the cycles of investment in oil and natural gas.[168] International trade negotiators are primed to put energy issues more front and center because the negative impact of extreme oil and gas price volatility in 2008 harmed the economies of both consumer and producer nations equally, highlighting the benefits to both sides of an improved international architecture for energy markets. Oil producers may have enjoyed rising state revenues from 2005- 2007, but they have been equally hit by the current contraction in the global economy. Indeed, the sudden collapse in oil prices in 2008-2009 was a warning that state budgets and national economies could quickly become vulnerable again. Longer term, per capita income trends clearly show that securing more stable, durable revenues would be preferable to the peaks

[168] See Andreas Goldthau and Jan Martin White, “Back to the Future or Forward to the past? Strengthening markets and rules for effective global energy governance,” *International Affairs* 5, no. 2 (2009) 373-390.

and valleys seen in the last two decades.[169] Russia's default on its sovereign debt during the oil price plunge in 1998 is but one example. The current financial problems of Venezuela and Iran are another.

International architecture that would promote adequate, steady investment in oil and natural gas resources is sorely lacking in the existing financial and global economic system. More consideration should be given as to how to remedy this deficit. There is currently little debate on the policies of sovereign wealth funds (SWF) of the oil exporters. Unlike Kissinger's economic development commissions, there is no bilateral or multilateral structure at present to discuss the need of SWFs to invest counter-cyclically in financing investment in oil-production capacity and accumulating above-the-ground reserves when prices are low, and selling out of their saved reserves when prices are high. Diversification strategies for SWFs are also important to reduce the impact of sudden petrodollar flow changes.

Domestically, the United States needs to move away from the "energy independence" mantra. The lessons learned from the administrations of Nixon through Reagan are that policymakers need to be careful not to overregulate an apparent problem to create new, unanticipated problems in the energy sphere. History has shown that price controls, import quotas, overly comprehensive environmental bans on different kinds of energy supply development and production, and wasteful subsidies to the alternative energy did not solve the U.S. energy problems but in fact worsened America's energy dilemmas. In many cases, markets can respond to discontinuities, with proper oversight by government agencies, and highlight practical and less costly solutions than a legislator can fabricate under pressure and against the backdrop of vocal regional and special interests to appease angry consumers.

The United States, for example, faces unique opportunities from emerging trends brought about during the latest energy price boom cycle. One such trend is to shift to an electric drive train in long-term automobile design. The other is the identification of ample domestic natural gas resources in the Lower Continental 48 states. Government policies can support the energy security gains that can come from these emerging U.S. domestic opportunities. Both enhanced

[169] *Oil, Dollars and Debt*, 35.

electrified automobiles and a wider shift to natural gas will help the United States diversify its fuel base, thereby creating broader flexibility for the United States in its oil diplomacy.

The U.S. success in the early 1980s in constraining unfettered growth in oil demand through efficiency gains in the American automotive fleet bode well for the recently passed tightening of car efficiency standards by the U.S. Congress. Saudi Arabia's leadership role in the G-20 also bodes well for a more cooperative diplomacy between the United States and OPEC at present. The Obama administration has a unique opportunity to try to institutionalize some of the gains that it has made in the past two years in oil consumer-producer cooperation to stabilize the global economy. The administration's focus on discussions with China on the subjects of Iran, oil and climate could lay the groundwork for larger gains in energy policy, including a broader dialogue with oil producers to fashion better strategies for managing oil trade, investment and revenue recycling.