The Futile Pursuit of "Energy Security" by Military Force

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As concern has risen over the future sufficiency and increased risk of disruptions in global oil supplies, "energy security"—or the uninterrupted acquisition of adequate petroleum to satisfy national requirements—has become a major U.S. foreign policy consideration. We must make energy security "a priority of our foreign policy," President Bush declared in March 2001. "The goals of this strategy are clear, to ensure a steady supply of affordable energy for America's homes and businesses and industries."[1] U.S. policy makers are well aware that an ever-increasing share of the United States' petroleum supply must be obtained from foreign suppliers; furthermore, because many of these suppliers are unfriendly to the United States or ensnared in internal conflicts, U.S. officials have long acceded to the use of military force to ensure the safe flow of oil. But now, it is appropriate to ask whether the militarization of overseas oil procurement is, in fact, a viable approach to energy security.

The use of military force to protect the flow of oil has been explicit U.S. policy since early 1980, when President Jimmy Carter issued his famous dictum—embedded in his State of the Union address of 23 January—that any effort by a hostile power to block the flow of oil from the Persian Gulf to the United States will be viewed as an assault on the United States' "vital interests" and will be repelled "by any means necessary, including military force." Because the United States did not at that time possess any military forces capable of implementing this policy, Carter also announced the establishment of the Rapid Deployment Joint Task Force (RDJTF) to perform this function, along with the permanent deployment of a U.S. naval flotilla in the Persian Gulf. This overarching policy—known ever since as the "Carter Doctrine"—has been endorsed by every president since Carter and now forms the foundation for U.S. grand strategy in the Persian Gulf region. Moreover, the policy of using force to protect the

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flow of petroleum has over time been extended to other oil-producing areas of the world.[2] Although never articulated as such, the U.S. government has embraced a sort of "globalized Carter Doctrine" that obliges the U.S. military to protect the flow of petroleum on a worldwide basis.[3]

At present, there are no indications that U.S. policy makers are inclined to limit or reverse the Carter Doctrine. Before examining this development in greater detail and weighing its consequences, it is first useful to consider the factors that are shaping this trend. Three, in particular, deserve our attention: (1) growing U.S. reliance on imported petroleum, (2) a historic shift in the center of gravity of world oil production from the global North to the global South, and (3) the increased targeting of oil installations by opponents of Western involvement in the Muslim world.

Growing U.S. Reliance on Imported Petroleum

Throughout most of the Petroleum Age, the United States was the world's leading oil producer and supplied most or all of its annual oil requirements with domestic supplies. As recently as 1970, for example, domestic output supplied four-fifths of total U.S. consumption. In 1972, however, production in the lower 48 states reached its maximum, or peak, output and began an irreversible decline while consumption continued to rise, producing an ever-increasing demand for imported oil. In 1998, the United States crossed the 50 percent threshold of reliance on imports for the first time, and by the start of 2006, imports constituted approximately two-thirds of total U.S. supplies.[4]

In estimates widely thought to be overly optimistic, the U.S. Department of Energy (DoE) projected in 2006 that imports would fall to 60 percent in 2025 through increased drilling in coastal areas and greater use of non-petroleum fuels like ethanol. According to these estimates, U.S. oil consumption will rise to 26.1 million barrels per day in 2025 (compared to 20.6 million barrels in 2005) while domestic output (including liquids gleaned from the extraction of natural gas and from other non-petroleum sources) will total 10.4 million barrels per day, producing an import requirement of 15.7 million barrels.[5] A more realistic assessment, I believe, would have to balance any increase in petroleum alternatives against a more rapid decline in conventional petroleum—producing a bigger gap between production and consumption, thereby generating a greater reliance on imports.[6]

Whether future U.S. reliance on imports is closer to 60 percent, as projected by the DoE, or 70 percent, as suggested by many independent analysts, there is no escaping the fact that the United States is and will remain highly dependent on foreign supplies. Because oil is the most significant item in the overall U.S. energy menu, this high level of dependence will remain a source of considerable geopolitical concern for U.S. policymakers for some time to come.

A Shift in the Center of Gravity of World Oil Production

For much of the Petroleum Age, the major sites of oil extraction were located in the global North: in the United States, Canada, Europe, Russia, and areas under their immediate control, since the major oil companies sought to operate in areas that were close at hand. As these sites now face systemic exhaustion, oil-consuming nations have increased their reliance on providers in the global South. These producers entered the energy business later than their counterparts in the North, and so their fields—in some cases larger than those in the North to begin with—are capable of sustaining higher levels of international demand. As a result, the center of gravity of world oil production has shifted decisively from North to South and will remain there for the remainder of the Petroleum Age.

Data and projections supplied by the DoE confirm this trend. In 1990, for example, producers in the global North (including the United States, Canada, the North Sea countries, Australia, Russia, and several others) jointly accounted for 39 percent of total world oil output; by 2030, their combined share is expected to drop to 26 percent.[7] Meanwhile, the DoE projects a significant increase in the share of world supply provided by key producing areas of the South, notably Africa, the Caspian Sea basin, and the Persian Gulf; together, the proportion of total world consumption accounted for by these three areas is expected to jump from 31 percent in 2003 to 48 percent in 2030.[8]

The growing role played by the global South in the provision of oil to the United States and other consuming nations has obvious geopolitical ramifications. Many of the oil-producing nations of the South are torn by ethnic, religious, and political strife. This is partly a legacy of colonialism and partly due to the fact that the production of oil is itself a significant source of instability in poor developing nations.

Among the most common and significant legacies of imperialism is the delineation of national boundaries that do not reflect ethnic realities. All too often, the imperial powers drew the boundaries of their colonial territories so as to satisfy their own pecuniary interests or to resolve political differences among themselves—*not* to meet the needs and aspirations of their colonial subjects. As a result, many of the major oil-producing nations, including Angola (with respect to Cabinda province), Azerbaijan (with Nagorno-Karabakh), Nigeria (with Biafra and the Niger Delta region), Indonesia (with Aceh), Iraq (with Kurdistan), Russia (with Chechnya), and Sudan (with the rebellious South), harbor ethnic enclaves that reject the legitimacy of the existing national boundaries and are fighting to redraw the map to better reflect their wishes—often targeting the oil facilities in their midst as part of their campaign.

Many post-colonial nations also suffer from weak state structures and a tendency toward military strongmen and pervasive corruption. What sets the oil-producing countries apart from others like them, however, is the powerful attraction that oil revenues (or "rents") have for all aspirants to national rule: once in power, the leaders of these "petro-states" will not balk at using brute force to eliminate threats to their continued supremacy (and thereby keep the oil rents flowing into their private bank accounts). This means that their competitors perceive no option save armed revolt to secure their own place in power. The result, more often than not, is a continuous cycle of coups, palace revolts, and counter-coups—often enmeshed with an impoverished and resentful population ready to rebel at the first sign of central government vulnerability.[9]

Oil Facilities as Targets of Attack

The problem of energy security is further compounded by the fact that oil facilities have themselves become a target of attack by insurgents and terrorists who view them as a concrete expression of the West's invasion of the Islamic world. Needless to say, those who oppose the U.S. presence in the Middle East have many motives for doing so: some derived from the Muslim world's centuries-old distrust of the West; some as a legacy of the more recent experience of colonialism. No doubt personal experiences of one sort or another also figure in this lethal stew. But there is no escaping the fact that the pursuit of oil and the West's desire to establish a significant presence in the Middle East has transformed the region in ways that are often resented by many of its Muslim inhabitants. In particular, there is widespread resentment of the close association between Western governments and oil firms on one side, and pro-Western Muslim governments on the other (e.g., the Mubarak regime in Egypt and the House of Saud). The increasingly conspicuous presence of U.S. military forces to protect these regimes and other expressions of U.S. involvements—especially oil installations—only adds to this resentment.[10]

Oil is seen by many terrorist groups as an attractive target in the struggle between militant Islam and its enemies, in part because of its symbolic importance as the major expression of Western intervention in the Middle East and in part because of its critical role in sustaining the West's energy-intensive economies. "Pipelines are very soft targets," Robert Ebel of the Center for Strategic and International Studies (CSIS) observed in 2003. "They're easy to go after. It doesn't take a rocket scientist to figure out where you can do the most damage, both physical and psychological, with the minimum amount of effort."[11]

An early expression of this strategy was the October 2002 attack on a French oil tanker, the *Limburg*, while it sailed off the coast of Yemen. Reportedly, the *Limburg* was intercepted by a small boat filled with explosives that came alongside it and detonated, blowing a hole in the hull and killing one sailor (along with those aboard the boat); almost 100,000 barrels of crude oil then spilled out into the surrounding water and burned. This attack—widely attributed to al-Qaeda—was seen as the opening salvo in a new campaign to punish and weaken the West by assaulting the exposed conduits of the global oil-supply system.[12]

Targeting exposed oil infrastructure has assumed particular significance in Iraq, where attacks on pipelines and pumping stations have become a near-daily experience. The assaults started soon after the outbreak of insurgent warfare in the summer of 2003, following the collapse of Saddam Hussein's regime. The critical export pipeline between Kirkuk in northern Iraq and Ceyhan in Turkey has been attacked each time it has opened.[13] Recurring attacks have also been conducted on other pipelines and facilities in Iraq, including offshore loading terminals in the Persian Gulf.[14] Given the frequency and sophistication of these attacks, it is evident that the insurgents are pursuing a calculated strategy of curtailing Iraqi oil exports in order to deprive the U.S.-backed Iraqi government of operating funds.[15] Indeed, Iraqi officials reported in November 2004 that sabotage of Iraq's oil infrastructure had already deprived the interim government of $7 billion in lost revenue—a prodigious sum for a government that is struggling to rebuild essential services and thereby win the support of the general population.[16]

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The strategic nature of oil terrorism is also evident in Saudi Arabia, where al-Qaeda and allied groups have targeted foreign firms and technicians employed by Saudi Arabia's oil industry, presumably to damage its operating capacity as part of a systemic drive by al-Qaeda to disrupt Saudi oil output.[17] Osama bin Laden himself lent credence to this interpretation when, in a December 2004 audiotaped message, he called on Muslim militants in the Middle East to "do your best to prevent them [i.e., the United States and its allies] from stealing oil. Focus your operations on it, especially in Iraq and the Gulf."[18]

The Consensus on Using Military Force

The commitment to use force to protect the oil is not a Democratic or Republican policy. Senior officials from both parties describe such action as contributing to the nation's vital interests, and portray it as a "public good" benefiting the world at large. This outlook was expressed with particular vehemence by a bipartisan task force convened by the CSIS in 2000 under the leadership of former senator Sam Nunn (a Democrat) and former secretary of defense James R. Schlesinger (a Republican). "As the world's only superpower," the task force concluded, "the United States must accept its special responsibilities for preserving access to worldwide energy supply." Other countries can help to keep the oil flowing, but "Washington must take the lead."[19] A 2006 bipartisan task force report released by the Council on Foreign Relations attested to the enduring nature of this consensus, again highlighting the role of the military in protecting the flow of oil.[20]

In practical terms, this has meant extending the application of the Carter Doctrine from the Persian Gulf to other major oil-producing areas, and expanding the types and numbers of roles assigned to the U.S. military in protecting the global flow of oil.

THE CARTER DOCTRINE AFTER CARTER

Although critical of his predecessor on many issues, President Ronald Reagan wholeheartedly endorsed the Carter Doctrine and lent it fresh impetus. On 1 January 1983, he elevated the Rapid Deployment Joint Task Force to a full-scale regional headquarters, the U.S. Central Command (Centcom), and charged it with the task of protecting the flow of oil from the Persian Gulf to markets in the West—a task which it retains today.[21] Reagan also demonstrated his adherence to the Carter Doctrine by actually putting it into practice. When, at the height of the Iran–Iraq War of 1980–1988, Iranian forces began to attack Kuwaiti oil tankers traveling through the Persian Gulf (presumably to discourage Kuwait from providing loans to Iraq for arms procurement), Reagan authorized the "reflagging" of Kuwaiti tankers with the U.S. ensign and their protection by U.S. naval forces. Such action was essential, Reagan declared, to demonstrate the "U.S. commitment to the flow of oil through the Gulf."[22]

Then, following Iraq's invasion of Kuwait, the White House instantly concluded that the invasion posed an indisputable threat to U.S. strategic interests as encapsulated in the Carter Doctrine. At a meeting at Camp David on 3 August, President George H. W. Bush ordered the Department of Defense to begin making plans for military action to defend Saudi oil fields, and three days later authorized then–secretary of defense Dick Cheney to begin deploying U.S. troops in the kingdom.[23]

Oil, and the fate of Saudi Arabia, stood at the center of White House deliberations in the early days of the crisis. In a nationally televised address on 8 August 1990, announcing his decision to use military force in the Gulf, Bush cited the United States' energy needs as his primary impetus. "Our country now imports nearly half the oil it consumes and could face a major threat to its economic independence," and so "the sovereign independence of Saudi Arabia is of vital interest to the United States."[24] Only later, when U.S. troops were girding for combat with the Iraqis, did administration officials articulate other justifications for war—the need to liberate Kuwait, to destroy Iraqi weapons of mass destruction (WMD), and so forth. The record makes it clear, however, that the president and his senior associates initially viewed the invasion of Kuwait through the lens of the Carter Doctrine.[25]

Despite the terrible drubbing Iraqi forces received during the 1991 Gulf War, Hussein's armies were still seen as a threat to U.S. strategic interests in the Persian Gulf, especially the oil-driven U.S. alliance with Saudi Arabia and Kuwait. The fact that Hussein was also thought by many in Washington to be seeking WMD only added to the impression of a substantial Iraqi threat. Ultimately, President George W. Bush concluded that the only way to eliminate this threat and thereby protect vital U.S. interests in accordance with the precepts of the Carter Doctrine was to invade Iraq and destroy the Hussein regime once and for all.[26]

This history provides critical context for the debate over whether the 2003 Iraq War was prompted by the pursuit of oil. While the administration can claim that it was primarily motivated by concern over the military threat posed by Iraq and not by a desire to seize Iraq's oil, the threat that Hussein was said to pose was, in fact, directed at the United States' continued control of the Persian Gulf area—control which has, since Carter's time, been viewed as essential to the uninterrupted flow of Persian Gulf oil. From a geopolitical perspective, oil was at the heart of the administration's outlook. Vice President Dick Cheney admitted as much in August 2002, when he told a Veterans of Foreign Wars convention that Saddam had to be removed from office because, once Iraq was equipped with weapons of mass destruction, he "could then be expected to seek domination of the entire Middle East, take control of a great portion of the world's energy supplies, [and] directly threaten America's friends throughout the region."[27]

Even if the fighting in Iraq eventually dies down, Centcom will continue to maintain a significant U.S. military presence in the Persian Gulf area and will employ force when needed to overcome threats to the free flow of oil. With Saddam Hussein recently executed and Iraq under U.S. military occupation, the next most potent threat to U.S. domination is said to emanate from Tehran. At present, the greatest danger posed by Iran is said to be its pursuit of nuclear weapons, but U.S. strategists are also concerned over the conventional Iranian military threat to the Strait of Hormuz—the narrow passageway connecting the Persian Gulf with the Indian Ocean and the world at large.[28] To ensure that Iran will not try to close the strait by firing on tankers crossing through it, Centcom ships and plans patrol the waterway daily and remain poised for an immediate clash with Iranian forces.

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Despite the continued bloodletting in Iraq, therefore, the Carter Doctrine and the safe flow of oil continue to govern U.S. strategy in the Persian Gulf area. U.S. forces are likely to remain deployed in the area—and to risk their lives on a daily basis—until the last drop of petroleum is extracted from the region.

THE GLOBALIZED CARTER DOCTRINE

The globalization of the Carter Doctrine by extending military protection to new oil-producing regions of the world reflects a growing U.S. desire to "diversify" U.S. sources of crude petroleum.[29] The strategy of diversification was first articulated by the Clinton administration to justify deepening U.S. involvement in the Caspian Sea basin, and later given more elaborate expression in the National Energy Policy released by President Bush on 17 May 2001. In line with this outlook, the Bush administration has made a concerted effort to strengthen U.S. ties with major oil producers in several key producing areas, including the Caspian Sea basin, the Andean region, and West Africa. Growing U.S. reliance on these other producing areas has been followed by a similar increase in U.S. military involvement.[30]

In the late 1990s President Clinton determined that the Caspian Sea basin should become a major source of oil for the United States and its allies. The newly-independent states of Azerbaijan and Kazakhstan were eager to sell their petroleum riches to the West, but they lacked an autonomous conduit for exports (at that time, all existing pipelines from the land-locked Caspian passed through Russia) and also faced serious challenges from ethnic minorities and internal opposition movements. Clinton agreed to assist in the construction of a new oil pipeline from Azerbaijan to Turkey via Georgia (thus bypassing Russia) and to help these states enhance their military capacity.[31]

U.S. military aid began flowing to the Caspian Sea states in 1997, at which time U.S. troops began a series of joint military exercises with forces from the region. Although never formally invoking the Carter Doctrine when announcing these actions, Clinton applied the same "national security" umbrella to Caspian Sea oil as had Carter to Persian Gulf oil. Hence, in a 1997 White House meeting with Heydar Aliyev (then president of Azerbaijan), Clinton declared, "In a world of growing energy demand, our nation cannot afford to rely on any single region for our energy supplies." By facilitating Azerbaijan's oil exports, "we not only help Azerbaijan to prosper, we also help diversify our energy supply and strengthen our nation's security."[32]

The regional ties President Clinton built were later utilized by President Bush to facilitate the U.S. intervention in Afghanistan following 9/11 and to support the ongoing campaign against remnants of al-Qaeda and the Taliban. This, in turn, has led to a substantial increase in U.S. military aid to these countries. A close reading of State and Defense Department documents suggests that the protection of oil remains a paramount concern in the Caspian. In requesting $51.2 million in assistance to Azerbaijan for fiscal year 2005, for example, the State Department affirmed that "U.S. national interests in Azerbaijan center on the strong bilateral security and counter-terrorism cooperation [and] the advancement of U.S. energy security." It further noted that "the involvement of U.S. firms in the development and export of Azerbaijani oil is key to our objective of diversifying world oil supplies."[33] Meanwhile, in Kazakhstan, the United States is helping to refurbish the old Soviet air base at Atyrau, near the giant offshore Kashagan oil field. This base will be used to house a Kazakh "rapid reaction brigade" whose task, according to the Department of State, will be to "enhance Kazakhstan's capability to respond to major terrorist threats to oil platforms or borders."[34]

A similar pattern of ever-expanding U.S. military involvement is also evident in the oil-producing Andean region of South America. The violent situation in Colombia is a source of particular concern; Colombia was once a leading oil supplier to the United States and has the potential to provide larger volumes in the future. However, the civil war that has gripped that nation over the past few decades has discouraged exploration in new areas and lowered the country's oil output. Contending that the violence in Colombia has produced an atmosphere of lawlessness in which the illegal drug trade can flourish, the United States has long provided arms and assistance to that Colombia's army and police forces. In 2002, however, the Bush administration announced another key objective for U.S. military assistance: to help the Colombian government protect its vulnerable oil pipelines. In the 2003 and 2004 fiscal years, the White House requested a total of $245 million for the purpose of bolstering security along the Caño Limón-Coveñas pipeline, a 480-mile-long conduit carrying oil from Occidental Petroleum's fields in the northeast to Coveñas on the Caribbean coast.[35] By intervening in this manner, Washington hopes to make the region safe for oil exploration and thus increase Colombia's future exports to this country.

U.S. military involvement in sub-Saharan Africa is at a less advanced stage, but here, too, concern over oil supplies is spurring a major increase in U.S. assistance. The growing importance of Africa in satisfying the United States' energy needs was first highlighted in the National Energy Policy of May 2001: "Sub-Saharan Africa holds 7 percent of world oil reserves and comprises 11 percent of world oil production. Along with Latin America, West Africa is expected to be one of the fastest growing sources of oil and gas for the American market."[36] Assistant Secretary of State Walter Kansteiner observed in 2002, "African oil is of national strategic interest to us, and it will increase and become more important as we go forward."[37]

African oil is being exposed to the same sort of Carter Doctrine military initiatives, the opening wedge of which is military assistance and training—an approach that facilitates the establishment of close ties with the region's (often dominant) military elites. Military aid to the African oil producers is supplied both in the form of bilateral assistance to individual nations as well as through multilateral security initiatives. Angola and Nigeria have been the principal recipients of bilateral aid, jointly receiving approximately $180 million in Fiscal Years 2004–2006. This has included transfers of arms and military equipment via the Foreign Military Sales and Foreign Military Sales Financing programs, along with specialized training given to Angolan and Nigerian military personnel under the International Military Education and Training (IMET) program. Other West African recipients of IMET assistance have included Chad, Congo-Brazzaville, Equatorial Guinea, and Gabon.[38] Such aid has included, for example, the delivery of seven surplus U.S. Coast Guard vessels to Nigeria, significantly increasing its capacity to protect offshore oil platforms and tankers in the Gulf of Guinea.[39]

But just as U.S. aid to the Caspian states was followed by the insertion of a permanent U.S. military presence in the region, the Department of Defense is slowly expanding its footprint in Africa and beginning to search for permanent bases in the region.[40] At present, however, the most visible expression of growing U.S. military involvement is an increased navy presence along Africa's west coast, the location of its most promising offshore oil fields. In 2003, for example, the head of the U.S. European Command declared that the aircraft carrier battle groups under his command "spend half their time going down the west coast of Africa."[41]

Recognizing, moreover, that U.S. combat troops may at some point be deployed on the ground in West Africa, the Defense Department is looking for potential basing locations in and around the major oil zones. According to recent media reports, the Pentagon is seeking "bare-bones facilities"—essentially, airstrips with modest logistical capabilities—in Ghana, Kenya, Mali, Senegal, and Uganda.[42] While military officials tend to emphasize the threat of terrorism when discussing the need for such facilities, they have told reporters from the *Wall Street Journal* that "a key mission for U.S. forces [in Africa] would be to ensure that Nigeria's oil fields, which in the future could account for as much as 25 percent of U.S. oil imports, are secure."[43]

Typically, these developments are reported piecemeal, as a series of unconnected events, or, at best, as part of a generalized expansion of U.S. military capabilities. But the information provided above suggests intentional and specific implementation of the Carter Doctrine.

The Futility of Relying on Military Force

Can it truly be said that the Carter Doctrine actually *enhances* U.S. energy security? There is good reason to conclude that this is not the case. I advance three main lines of argument in making this case: First, the conspicuous deployment of U.S. forces arouses more animosity than it quells; Second, military force is a costly and largely ineffective tool for protecting oil installations and travel routes; And third, the very reliance placed on military action distracts us from the necessary task of undertaking the necessary transition to a post-petroleum energy system.

The U.S. experience in Saudi Arabia offers perhaps the best cautionary tale about the dangers arising from the conspicuous deployment of U.S. military forces in oil-producing regions abroad. When the United States first sought to station troops in the kingdom at the end of World War II, King Abdul Aziz ibn Saud opposed the plan because, as the U.S. ambassador told his superiors in Washington, he thought it would provoke "violent criticism from reactionaries and fanatics."[44] Forty-five years later, when then–secretary of defense Dick Cheney asked Ibn Saud's successor, King Fahd, for permission to station hundreds of thousands of U.S. troops on Saudi territory to conduct Operation Desert Storm, he was greeted with similar concern. Eventually, Fahd agreed to the plan—but only after Cheney promised that the troops would be withdrawn once Iraqi forces were driven out of Kuwait.[45] As things turned out, Bush Senior decided to retain many of the troops in Saudi Arabia in order to enforce the containment of Iraq, and this continued presence of "infidels" in the Islamic "Holy Land" later became the rallying cry for Osama bin Laden in his efforts to recruit young Saudis for his violent campaign against the United States.[46]

More recently, the war in Iraq appears to confirm the view that the deployment of U.S. troops to protect oil installations often arouses more hostility than it affords protection. The United States made its ultimate priorities clear when, following the initial U.S. entry into Baghdad in April 2003, U.S. troops guarded the Oil Ministry building while allowing the rest of the city to be sacked by mobs and looters.[47] This impression has been given further credence by reports that funds intended for municipal reconstruction have instead been used to protect oil pipelines, refineries, and loading facilities.[48] No matter how hard U.S. officials have sought to affirm Washington's commitment to Iraq's wellbeing, nothing they have done has entirely erased the impression among a large share of the Iraqi population that the United States' principal interest in Iraq is its oil.

Following the initial U.S. entry into Baghdad in April 2003, U.S. troops guarded the Oil Ministry building while allowing the rest of the city to be sacked by mobs and looters.

Despite the many billions of dollars that have been spent to increase the security of pipelines and other oil infrastructure in Iraq, insurgents continue to damage these facilities on a regular basis, severely undercutting the government's capacity to finance itself through the export of oil. Many reasons have been given for this, including the obvious difficulty of protecting such exposed, inherently vulnerable installations; incompetent and corrupt security forces; the insurgents' superior knowledge of the landscape; and so on, but the bottom line is that every effort by the Iraqi government and its U.S. backers to enhance the security of Iraq's oil infrastructure has met with failure.[49] A very similar picture has emerged in southern Nigeria, where government efforts to protect oil installations from attack by the Movement for the Emancipation of the Niger Delta and other rebel groups have had an equally poor record.[50]

It should be noted, moreover, that such operations are inherently expensive. Although it is impossible to put an exact price tag on the cost of global enforcement of the Carter Doctrine, a reasonable estimate would run to about $100 billion per year, or approximately one-fourth of the U.S. defense budget, not counting the expense of the war in Iraq. This would encompass the day-to-day operations of forces committed to the U.S. Central Command plus some share of forces in the European, Pacific, and Southern Commands that are engaged in oil-protection services of one sort or another. Also included would be the billions of dollars in military aid to such oil-producing or oil-transporting states as Angola, Azerbaijan, Colombia, Georgia, Kazakhstan, and Nigeria. If any portion of the war in Iraq is added to this tally, the net cost of protecting oil would, of course, rise much higher.

Finally, all of this is a distraction from the main task facing U.S. leaders in the energy field—to prepare for the day when petroleum must be replaced with other, more environmentally friendly sources of energy. Although it is likely that oil will remain plentiful for another five to ten years or perhaps a bit longer, a growing chorus of experts believe that we are fast approaching the moment when global oil output will reach its peak level and begin an irreversible decline—at which point alternatives must be available to take up the slack or the United States will face an energy shortfall and an economic catastrophe. Whatever the situation in the short-term, former secretary of defense Schlesinger told the Senate Foreign Relations Committee in November 2005, "We face a fundamental, longer-term problem. In the decades ahead, we do not know precisely when, we shall reach a point, a plateau or peak, beyond which we shall be unable further to increase production of conventional oil worldwide. We need to understand that problem now and begin to prepare for that transition."[51]

Ironically, it was Schlesinger who advocated the use of force to protect oil in the 2000 CSIS report, but here he is pointing in a different direction: to the development of petroleum alternatives such as ethanol, hydrogen, and renewables. Developing these alternatives on a large enough scale to replace the missing petroleum in 2020 and beyond will require investment on a massive scale, comparable to that devoted to the Manhattan Project of World War II, or the Apollo Moon Project. It is not likely that the United States can spend $100 billion or more per year on enforcement of the Carter Doctrine *and* devote a similar amount (as will be required) to develop petroleum alternatives. Hence, rejection of the globalized Carter Doctrine is a prerequisite of sorts for making the necessary energy "transition" described by Secretary Schlesinger.

In conclusion, the existing consensus on the use of military force to ensure U.S. energy security is neither effective in providing actual security nor conducive to the United States' long-term national interests. Instead, the United States should repudiate the globalized Carter Doctrine and embrace a new definition of energy security that relies first and foremost on the development of petroleum alternatives that do not entail reliance on supplies from dangerous areas or the use of force to ensure their availability.

Notes

1. George W. Bush, "Energy Security," White House, http://www.whitehouse.gov.

2. For background on these events, see Michael Palmer, *Guardians of the Gulf* (New York: Free Press, 1992), 101–111.

3. Michael T. Klare, *Blood and Oil: The Dangers and Consequences of America's Growing Dependency on Imported Petroleum* (New York: Metropolitan Books, 2004), 1–7, 132–145.

4. BP, *BP Statistical Review of World Energy* (London: BP, 2006), 8, 11.

5. U.S. Department of Energy/Energy Information Administration, "Table A4 and E1," *International Energy Outlook 2006* (Washington, DC: DoE/EIA, 2006), 87, 155.

6. For background on the debate over future petroleum availability, see Kenneth S. Deffeyes, *Hubbert's Peak: The Impending World Oil Shortage* (Princeton: Princeton University Press, 2001); David Goodstein, *Out of Gas* (New York: Norton, 2004); and Paul Roberts, *The End of Oil* (Boston: Houghton Mifflin, 2004).

7. U.S. Department of Energy/Energy Information Administration, "Table E1," *International Energy Outlook 2006*, 155.

8. Ibid.

9. For discussion of these phenomena, see Terry Lynn Karl, *The Paradox of Plenty* (Berkeley: University of California Press, 1997).

10. For discussion, see Michael Scheuer, *Imperial Hubris* (Washington, DC: Brassey's, 2004). Michael Scheuer was identified as the author of this book in Eric Lichtblau, "C.I.A. Officer Denounces Agency and Sept. 11 Report," *New York Times*, 17 August 2004.

11. Warren Vieth and Alissa J. Rubin, "Iraq Pipelines Easy Targets for a Saboteur," *Los Angeles Times*, 26 June 2003.

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14. See Yochi J. Dreazen and Hassan Hafidh, "Iraq Attacks Stall the Flow of Crude," *Wall Street Journal*, 10 August 2004; Eric Watkins, "Iraqi Oil Exports Hampered by Pipeline Saboteurs," *Oil and Gas Journal* 101, no. 33 (2003): 48–49; Watkins, "Iraq Oil Output to Rise, Despite Sabotage, Minister Says," *Oil and Gas Journal* 101, no. 45 (2003): 32–33.

15. For discussion, see John Tierney and Robert F. Worth, "Attacks in Iraq Might Be Signs of New Tactics," *New York Times*, 18 August 2003.

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