The National Security Consequences of Oil Dependency

Ariel Cohen, Ph.D.

The United States is the largest oil importer in the world, bringing in 13.5 million barrels per day (mbd), which accounts for 63.5 percent of total U.S. daily consumption (20.6 mbd). Oil from the Middle East—specifically, the Persian Gulf—accounts for 20 percent of U.S. oil imports, and this dependence is growing. By 2017, the U.S. will be importing approximately 68 percent of its oil needs. Oil consumption represents 40 percent of America's energy needs, primarily used in ground and air transportation. The dependence of the U.S. and the global economy on oil is growing, which can have dire consequences for the economic well-being of the United States, our national security, and the American way of life.

Securing the stability of our oil supply to the best extent possible in cooperation with traditional U.S. allies, while bringing on board the emerging major oil consumers, such as India and China, should be the key diplomatic strategy for the intermediate term. At the same time, the U.S. needs to deter those, from Tehran to Caracas, who are seeking to harm and destabilize the world energy supply chain.

Working with suppliers and consumers to expand the transparency of, and international access to, existing oil supply by international oil companies, is a policy for the longer term. Vast U.S. domestic oil and gas reserves cannot and should not be outside of the reach of our consumers and our energy corporations. Expanding our energy mix to include non-traditional oil sources, such as oil sands, oil shale, deep off-shore oil, and heavy crude is another important component

Talking Points

- The dependence of the U.S. and the global economy on oil is growing, which can have dire consequences for the economic wellbeing of the United States, our national security, and the American way of life.
- Securing the stability of our oil supply to the best extent possible in cooperation with traditional U.S. allies, while bringing on board the emerging major oil consumers, such as India and China, should be the key diplomatic strategy for the intermediate term.
- At the same time, the U.S. needs to deter those, from Tehran to Caracas, who are seeking to harm and destabilize the world energy supply chain.
- Working with suppliers and consumers to ensure the international access to the existing oil supply by international oil companies, establish equal playing field, and expand the transparency of hydrocarbon reserves, is a policy for the longer term.

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in diversifying supply, as is producing more transportation fuel from coal and "gas-to-liquids." Finally, encouraging investment and innovation in truly competitive alternative fuels and technologies, from sugar cane ethanol to plug-in hybrids—which will eventually compete with and possibly replace the current 19th century automotive technology—may be the best long-term answer for enhancing our energy security in the 21st century.

Securing the U.S. Energy Supply

The security and availability of global energy resources directly affects the U.S. economy. U.S. policies should enhance the security, stability, and economic development and the rule of law in oil-producing countries to ensure that energy resources remain readily available, ample, affordable, and safe—for everyone's benefit.

In his 2006 State of the Union address, President George W. Bush said, "[W]e have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world." Recognizing the problem is laudable; however, relatively little has been done to solve it. There is a broad consensus in America, from the President to the man on the street, that the current situation is detrimental to the country's economic health.

The world, both developed and developing, is dependent on unstable or otherwise inhospitable regions for its oil supply. This social and political instability characterizes all of the major oil provinces: the Middle East, Venezuela, and Africa. Russia presents a separate set of issues which will be dealt with below. Dealing with security and political factors limiting the development of oil and gas production needs to be a high priority for any Administration—Republican or Democrat. This is particularly challenging because there are so many moving parts in this complex system.

One of the most important avenues for dealing with the oil shortage is through conservation. Another is developing substitute and alternative fuels, such as ethanol, methanol, and gas-to-liquid. Higher oil prices are likely to dictate new engine and car designs that will work more efficiently and/ or run on different fuels. The plug-in hybrids and other technological breakthroughs may eventually wean the world from the internal combustion engine and oil dependence. However, such technological and structural transformations are, like many things, likely to take longer than many expect, are certain to require massive investments, and are beyond the scope of this testimony.

For the near term, let us focus on the principal avenues of securing our oil supply, which include:

- Deterring anti-status quo players, such as Iran, Venezuela, and the global radical Islamist movement with its terrorist organizations;
- Cooperating with local governments to enhance the protection of critical shipping choke points, such as the Suez Canal, the Bosporus, Bab-el-Mandeb, the Strait of Hormuz, the Strait of Malacca, etc., and developing contingency plans for sea-borne terrorism/piracy aimed at tanker ships;
- Boosting an international coalition of oil consumers by bringing aboard India, China and other major emerging markets, such as Brazil and Turkey; and
- Securing open access and a level playing field for international oil companies and national oil companies. Specifically, consumer countries should make as their top foreign policy priorities openness of investment regimes; stable, predictable, and transparent energy regulatory systems based on the rule of law in producing countries; and fighting corruption.

The Middle East

The Middle East's Persian Gulf is the richest and most important oil province in the world. Forty percent of the daily shipment of oil passes through the Gulf. Approximately 20 percent of U.S. oil comes from the Gulf.

^{2.} George W. Bush, "State of the Union Address by the President," January 31, 2006, at www.whitehouse.gov/stateoftheunion/2006 (March 5, 2006).



^{1.} U.S. Department of Energy, International Energy Administration, "U.S. Weekly Petroleum Products Product Supplied," at http://tonto.eia.doe.gov/dnav/pet/hist/wrpupus2w.htm (March 31, 2006).

Currently, the security and stability of Middle East oil is threatened by ongoing conflicts in Iraq; an aggressive and nuclear Iran; and radical Islamist movements, with their terrorist arms, whose goals include toppling regimes throughout the Gulf, including the swing producer of oil, Saudi Arabia.

Islamist movements, nurtured to a great extent by oil revenues from Gulf states, aim to eventually create a global Islamic empire—the Caliphate. These movements ultimately strive to subjugate and convert non-Islamic countries to their brand of Islam. This is a very long-term project, and ultimately, it will hopefully be a futile one. However, in the meantime, the existence and the goals of these movements pose an immediate threat to the security of some of the most crucial sectors of the world oil supply.

Sellers' Market. Today's global oil market is operating without the benefit of additional production capacity or significant strategic petroleum reserves beyond the U.S. reserves. The Saudi spare capacity has deteriorated over the past decade by one-half, from 3–4 mbd to 1–1.5 mbd. To make matters worse, some experts question reserve estimates provided by national oil companies in the Gulf and elsewhere, as these numbers are not independently audited. Without a clear understanding of how much oil is available, the world may be up for more nasty surprises.

Terrorist attacks that have been carried out to date on the oil infrastructure have clearly caught oil producers unprepared. For example, al-Qaeda's February 24, 2005, attack on the Aramco facility in Abqaiq, Saudi Arabia, sent shock waves through the world's financial markets. On the same day, the price of oil on international markets jumped nearly

\$2 per barrel, despite the attack's complete failure (the terrorists and two security guards were killed.)³

Most analysts agree that the February attack, an additional attempt on March 28, 2005, and a 9/11-style assault in April 2007, all of which were successfully averted, were merely trial runs in a much longer campaign designed to disrupt the global economy in general, and the oil and gas industry in particular. As the September 11, 2001, World Trade Center attacks demonstrated, al-Qaeda tends to return to the scene of the crime, so another strike on Abqaiq and other oil targets is likely.

Both Osama bin Laden and Ayman al-Zawahiri have repeatedly called for attacks on key Western economic targets, especially energy sources.⁵ In a tape aired by Al-Jazeera in February 2006, Zawahiri said:

I call on the mujahideen to concentrate their attacks on Muslims' stolen oil, most of the revenues of which go to the enemies of Islam while most of what they leave is seized by the thieves who rule our countries.⁶

The unfortunate reality is that the Middle East remains the strategic center of gravity of the global oil market—a position that is not likely to change in the medium term. As long as radical Islamists, China, Russia, India, and Europe continue the struggle for the world's limited oil supply, the region will remain unstable. If the U.S. is to protect itself from these economic and political threats, it must use all the tools at its disposal to protect energy assets around the globe, while decreasing the world's dependence on Middle Eastern oil as quickly and efficiently as possible.

Oil as a Weapon. Many Arab leaders understand the dynamic of the world's oil dependence. For example, as early as 1990, the late Yassir Arafat said:

^{6. &}quot;Bin Laden War on West Just Starting: Deputy," *The Age* (Melbourne, Australia), December 8, 2005, at www.theage.com.au/news/world/bin-laden-war-on-west-just-starting-deputy/2005/12/07/1133829660913.html (March 29, 2006).



^{3.} Aljazeera.net, "Al-Qaida Says It Hit Saudi Oil Facility," February 25, 2006, at http://english.aljazeera.net/NR/exeres/A429E32C-D484-424E-9C58-D9E287580817.htm (March 6, 2006).

^{4.} Stratfor, "Saudi Arabia: Abqaiq Attack Thwarted," March 29, 2006, at www.stratfor.com/products/premium/read_article.php? selected=Situation%20Reports&sitrep=1&id=264105 (March 31, 2006). See also, "Saudi Arabia Nabs 40 Terror Suspects," Kuwait Times, March 31, 2006, at www.kuwaittimes.net/Navariednews.asp?dismode=article&artid=829180313 (March 31, 2006).

^{5. &}quot;'Bin Laden' Tape Urges Oil Attack," BBC News, at http://news.bbc.co.uk/2/hi/middle_east/4101021.stm (March 29, 2006). See also Agence France-Presse, "Bin Laden Threat Drives Oil to Four-Month High," *The Taipei Times*, January 21, 2006, p. 12, at www.taipeitimes.com/News/worldbiz/archives/2006/01/21/2003290110 (March 5, 2006).

When the North Sea oil dries up in 1991, the United States will want to buy Arab petroleum. And when the American oil fields themselves run dry and oil consumption in the United States increases, the American need for the Arabs will grow greater and greater.⁷

This observation has not been lost on the current generation of politicians and terrorist leaders. However, bin Laden and Zawahiri are not satisfied with the unwieldy weapons of oil boycotts and buying political influence in the West. Instead, they are clearly zeroing in on the oil-rich kingdoms of Saudi Arabia and the Persian Gulf as their principal targets. They also appear increasingly interested in attacking the entire global oil industry, from wells to wheels.

The failed February 2005 strike and the prevented March 2005 attack on Abqaiq, mentioned earlier, were not the first times that al-Qaeda has targeted energy assets in the region. In October 2002, al-Qaeda attacked the *Limbourg*, a French oil tanker, off the coast of Yemen with a suicide boat filled with explosives. In 2002, American and Saudi intelligence agencies uncovered a plot by al-Qaeda sympathizers inside Saudi Aramco to destroy key Saudi oil facilities. In 2003–2004, al-Qaeda attacked the Saudi port of Yanbu and murdered five Western engineers working there.⁸

Some analysts have warned that a carefully targeted terrorist attack on oil facilities in Saudi Arabia could reduce Saudi oil production to 4 million barrels per day or less for up to three months, which would have disastrous results for the global economy.

Iran

The leadership of the Islamic Republic of Iran is engaged in operational planning to intercept the flow of oil in the Gulf. Despite Iranian President Mahmoud Ahmadinejad's earnest and ongoing attempt to project the image of an irrational leader of what international relations theorists have called a "crazy state," many analysts have yet to recognize fully the dire ramifications of Iran's professed intention to develop a nuclear weapons program.

If diplomacy fails, Iran's pursuit of nuclear weapons will leave the U.S. and its allies with few choices, all of them unpalatable.

In June 2006, Iran's oil minister cautioned, "If the country's interests are attacked, we will use all our capabilities, and oil is one of them." Perhaps most alarming are the remarks of Iran's Supreme Leader Ayatollah Ali Khamenei in the same month: "If the Americans make a wrong move toward Iran, the shipment of energy will definitely face danger, and the Americans would not be able to protect energy supply in the region."

The economic consequences of a military strike on Iran's nuclear facilities to the world energy market would likely be significant, if not disastrous. Immediately following military action, according to a Turkish assessment, uncertainty about Iran's ability to sustain oil production at the current level of 4 mbd could drive oil prices above \$80 per barrel. If Iran retaliated and escalated by shutting down the Strait of Hormuz, which would merely require placing anti-ship mines in the strait, 10 the temporary loss of more that 15 million barrels of oil to the international market could drive oil prices above \$83 per barrel, the historic height of the 1970s (adjusted for inflation). 11 In fact, a recent Heritage Foundation war game and economic study speculated that oil prices could go as high as \$120/barrel for a limited time.

^{11.} Hong Kong Trade Development Council, "Reassessing the Impacts of Higher Oil Prices," tdctrade.com, August 1, 2005, at www.tdctrade.com/econforum/boc/boc050801.htm (March 6, 2006).



^{7.} Mitchell G. Bard, "Middle East Policy and Oil," Jewish Virtual Library, at www.jewishvirtuallibrary.org/jsource/US-Israel/usoil.html (March 29, 2006).

^{8.} Saudi–U.S. Relations Information Service, "Gunmen Attack in Yanbu," *Special Report* No. 3, May 3, 2004, at www.saudi-us-relations.org/newsletter2004/saudi-relations-interest-05-03.html (March 5, 2006).

^{9.} Anadolu News Agency, "Iran Warns of Excessive Oil Prices," *Zaman* (Istanbul), February 14, 2006, at www.zaman.com/?bl=hotnews&alt=&trh=20060214&hn=29790 (March 6, 2006).

^{10.} Kenneth R. Timmerman, "Iran Readies Plan to Close Strait of Hormuz," *Newsmax.com*, March 1, 2006, at *www.newsmax.com/archives/articles/2006/2/28/181730.shtml?s=lh* (March 6, 2006).

On the other hand, Iran's aspirations in the region are far-reaching. Allowing Iran to join the nuclear club introduces the possibility of Iranian interference throughout the Middle East, especially given Iran's proximity to so many of the world's largest oil fields. The large Iranian military, if amply supplied by Russia and China, would be in a position to dominate the Persian Gulf under a nuclear umbrella, particularly if U.S. ground forces were pinned down in Iraq.

Currently, Iran enjoys the support of some Shi'a forces in Iraq, especially Muqtada al-Sadr's Mahdi Army, and in the Shi'ite-populated Ash Sharqiyah (Eastern) Province of Saudi Arabia. This could facilitate a pro-Iranian Shi'a takeover of some of the largest oil fields in the world. In a worst-case scenario, a nuclear Iran could threaten the United Arab Emirates and Kuwait. If this were to happen, the Islamic Republic could quickly secure a sizable part of the world's oil supply, bringing the nuclear-armed militant Iran close to a virtual monopoly over the world's energy market.

Iran's Dangerous Arsenal. Since the 1990s, Iran has been upgrading its military with a host of new weapons from China, Russia, and North Korea, as well as with weapons manufactured domestically.

Today, Iran boasts an arsenal of Iranian-built missiles based on Russian and Chinese designs that are difficult to counter both before and after launch. Of particular concern are reports that Iran has purchased the SS-N-22 Moskit/Sunburn anti-ship missile. The supersonic Sunburn is specifically designed "to reduce the target's time to deploy self-defense weapons" and "to strike ships with the Aegis command and weapon control system and the SM-2 surface-to-air missile." Iran is also well stocked with older Chinese HY-1 Seersucker and HY-2 Silkworm missiles and the more modern C-802 anti-ship cruise missile (ASCM)—designs that Iran has successfully adapted into their own Ra'ad ad Noor ASCMs.

Iran has a large supply of anti-ship mines, including modern mines that are far superior to the

simple World War I–style contact mines that Iran used in the 1980s. They include the Chinese-designed EM-52 "rocket" mine, which remains stationary on the sea floor and fires a homing rocket when a ship passes overhead. In the deep waters in the Strait of Hormuz, such a weapon could destroy ships entering or exiting the Persian Gulf. According to one expert, Iran "can deploy mines or torpedoes from its Kilo-class submarines, which would be effectively immune to detection when running silent and remaining stationary on a shallow bottom just outside the Strait of Hormuz." Iran could also deploy mines by helicopter or small boats disguised as fishing vessels.

Mines are only one of a host of potential Iranian threats to shipping in the Persian Gulf. The naval commandos of Iran's Revolutionary Guards are trained to attack using fast attack boats, mini-sub-marines, and even jet skis. The Revolutionary Guards also have underwater demolition teams that are trained to attack offshore oil platforms and other facilities. Finally, Tehran could use its extensive terrorist network in the region to sabotage oil pipelines and other infrastructure or to strike oil tankers in port or at sea.

Consequences of a Supply Disruption in the Persian Gulf. With supplies growing and the price of oil falling, there has been a shortsighted tendency to underplay the threat posed by a major disruption in the Persian Gulf.

Although oil prices fell precipitously after the outbreak of the Iran–Iraq War, it is important to remember that global energy needs are much different today from what they were during the 1980s. Oil production is at record levels, but global demand has increased significantly, especially in the past 15 years. Under today's conditions, the slightest disruption could drive oil prices back up toward historic levels.

The U.S. Deterrent?

U.S. military forces in the Persian Gulf could quickly establish superiority over Iran's conven-

^{13.} Michael Knights, "Deterrence by Punishment Could Offer Last Resort Options for Iran," *Jane's Intelligence Review*, March 20, 2006.



^{12.} GlobalSecurity.org, "Moskit SS-N-22 Sunburn," at www.globalsecurity.org/military/world/russia/moskit.htm (May 9, 2007).

tional ground, air, and naval forces in any crisis, but Iranian mobile missiles, mines, commando attacks, unconventional warfare, and terrorist sabotage would pose more persistent threats that would be much harder to neutralize. The United States and its allies could eventually defeat Iranian attempts to close the Strait of Hormuz. Yet Iran could intensely threaten Gulf shipping for short periods, deter commercial ships from entering the Gulf, drive up insurance rates for Gulf shipping, and boost world oil prices on nervous markets.

The Bush Administration is already maintaining a strong U.S. and allied naval presence in the Persian Gulf. Washington should also encourage its NATO allies, Japan, India, and Australia, to deploy their naval forces periodically to the region. The Pentagon should conduct naval, air, and ground exercises with the Gulf Cooperation Council (GCC) states of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates—particularly in the areas of minesweeping, port security, and missile defense—to demonstrate the capability and resolve to defeat potential Iranian threats. In particular, the U.S. Navy's mine warfare capability is potentially inadequate and under-prepared for the increasingly sophisticated arsenal that Iran can deploy. The U.S. should further upgrade its naval capabilities, including minesweeping and anti-ship missile defense. Washington should also encourage the GCC countries to invest in their own naval minesweeping capabilities.

The Bush Administration should work with allies to develop contingency plans. The U.S. should encourage other nations to develop or increase their emergency oil reserves. Washington should also encourage Saudi Arabia and other Gulf oil producers to stockpile materials and equipment needed to rapidly repair damaged oil infrastructure and build new oil pipelines that bypass the Strait of Hormuz. Any such efforts would take time to complete, which is why it is imperative to begin now.

Beyond these crisis-specific guidelines, it is crucial that the U.S. follow through with these particular measures:

Boost efforts to roll back Iran's subversive ideological, terrorist, and military threats;

- Diversify the geographic sources of U.S. energy imports;
- Diversify the energy basket by expanding the domestic production of oil and gas, including drilling in ANWR (Arctic National Wildlife Refuge) and off-shore, along both the Pacific and Atlantic continental shelves, and in the Gulf of Mexico;
- Expand extraction from market-based, non-traditional oil sources such as oil sands (tar sands), oil shale, and super-heavy oil; expand gas-toliquid fuel production;
- Encourage expanded methanol and ethanol production and imports based on market principles; and
- Waive punitive importation tariffs on sugar cane ethanol.

Russia and Eurasia

Since coming to power in 2000, President Vladimir Putin and his entourage have doggedly pursued policies aimed at concentrating the huge oil and gas assets of the Russian Federation and its pipeline in the hands of the state. State prosecutors used tax evasion charges to take over the YUKOS oil company, which has had its highest market valuation—in excess of \$43 billion. Other oil companies are now merging with government-controlled entities, albeit less violently. Russia is using state-owned energy assets as tools of its foreign policy to make its neighbors in the former Soviet Union and Europe more pliable. It is also actively seeking to prevent or pre-empt pipeline routes from the Caspian to the West that bypass Russia.

The natural gas sector is also at risk. These days Russia, Iran, Venezuela, Qatar, and Algeria are reportedly pursuing the creation of a "natural gas OPEC," an important strategic development in energy markets in view of projections that liquid natural gas (LNG) will quadruple its trading volume in the next 15–20 years or sooner.

Three major Eurasian energy developments in the month of March made Washington policymakers jittery. First, Hungarian Prime Minister Ferenc Gyurcsany announced that his country would prefer Gazprom's Russian gas pumped via



Turkey to the much-lauded, but much delayed NABUCCO project. The NABUCCO pipeline, spearheaded by the Austrians, was supposed to bring up to 30 billion cubic meters of gas from the Caspian to Europe through Turkey, Bulgaria, Romania, Hungary, and Austria.

Second, Russia, Bulgaria, and Greece signed an agreement to construct a Burgas–Alexandroupolis oil pipeline to bypass the Turkish-controlled Bosporus Strait, a dangerous oil transport chokepoint. The project, which some call "the Orthodox Pipeline," will neutralize Turkey's control of the vital oil artery, and reduce the liability that could occur as a result of a catastrophic event, such as a tanker fire or an explosion in the middle of the populous (14 million people) city of Istanbul. The Burgas–Alexandroupolis pipeline will have a 51 percent majority control of three Russian government companies—Transneft, Gazpromneft, and Rosneft—with the remaining 49 percent split between Bulgaria and Greece.

On March 6, 2007, Vagit Alekperov, chairman of LUKoil, announced that his company and Gazpromneft would create a joint venture to develop future projects, which would be 51 percent controlled by Gazpromneft—another step down the path of creeping nationalization.

Finally, British Petroleum hinted that its Russian partner, TNK, may sell out its share in the TNK–BP joint venture to a Russian state-owned company. At the same time, Russia is developing plans to build the second Bosporus bypass from a port on the Black Sea such as Samsun, or Trabzon, to the Mediterranean.

These strategic moves, which took place in just one month, clearly indicate that the Russian state is pursuing a comprehensive strategy that masterfully integrates geopolitics and geo-economics.

On the geo-economic side, Russia aims at preempting Caspian oil and gas from being transported to world markets through countries and pipelines which Russia does not control. Moscow viewed the Western-controlled Baku—Tbilisi—Ceyhan oil pipeline and the Baku—Erzurum gas pipeline with a jaundiced eye. Now it is dead-set upon preventing the creation of trans-Caspian arteries—from Kazakhstan and Turkmenistan—to enhance the viability of either or both.

Thus, from Moscow's perspective pumping Russian gas via the Blue Stream pipeline across the Black Sea to Turkey, and then through connectors to Greece, Italy, and possibly via Bulgaria and Romania to Hungary, makes a lot of sense. This would preclude or delay the construction of a trans-Caspian gas pipeline that would transport Turkmenistani or Kazakhstani gas.

Pumping more oil to the Mediterranean via the Burgas—Alexandroupolis pipeline, or in the future, the Samsun—Ceyhan pipeline, which will be supplied with Kazakh oil, through the port of Novorossiisk makes sense as well, denying Kazakhstan a viable trans-Caspian pipeline option to connect to the Baku—Tbilisi—Ceyhan pipeline.

These proposed sea-pipeline routes are going to be problematic: Tanker loading and unloading of crude in the trans-Black Sea leg, or extending the gas route under the Black Sea and via Turkey and Southern Europe make these pipelines very expensive and environmentally challenging. By selecting these routes, Russia clearly chooses strategy over economics.

Russian strategic goals are to prevent countries on its borders from becoming pro-American. By locating pipelines and gas storage facilities in Hungary, Bulgaria, Greece, and Turkey, Russia connects them to Moscow by "ties that bind"—pipelines. Oil projects tend to leak not just crude, but cash.

The elites in these countries have reportedly personally benefited from Russian energy developments to the tune of hundreds of millions of dollars. The opaque Russian—Ukrainian gas marketing venture Rosukrenergo, former German Chancellor Gerhardt Schroeder's chairmanship of Nordstream, Turkish ministers' bribe scandals connected to the Russian Blue Stream gas pipeline, and other scandals prove this point.

The best strategy, wrote the great Chinese general Sun Tzu in the third century B.C., is to win a war without firing a single shot. This also includes, according to Sun Tzu, penetration and subversion of the enemy camp. To paraphrase another great strategic theorist, the Prussian Carl von Clausewitz,

foreign policy is the continuation of war by other means, at least in the view of some retired Russian colonels and generals who call the shots in the Kremlin.

Thus, there is no better way to "win the war" than to maximize geopolitical clout without firing a shot—and making money as you go. Russia is attempting to do so by building and extending a network of politically influential pipelines to adjacent countries. As the result, a Russian-influenced cordon sanitaire appears along its borders.

When it comes to oil and gas strategy, the Kremlin is in a league of its own. This is like watching a chess grand master playing multidimensional chess with oil and gas fields and pipelines over decades. Middle Eastern rulers would do well to attend this master class.

The Bush Administration should be taking some diplomatic steps to oppose this Russian gambit. It is already conducting consultations with the European Union to coordinate energy policy. Washington wants to raise awareness of Russia's energy strategy and condition Moscow's access to downstream operations in Europe on Western companies' access to Russian upstream energy resources.

However, the EU, including its Brussels apparatus, is split, since Germany is already deferential to Russia's energy interests. German companies such as E.ON are in partnerships with Gazprom to develop gas fields and downstream operations in Russia and Europe. It is also possible that the U.S. State Department may intervene with Bucharest to prevent a proposed Gazprom pipeline from Turkey from crossing Romanian territory. Clearly, the two small U.S. military bases in Romania and Bulgaria and the proposed missile defense base and radar in the Czech Republic and Poland are not going to stop Russian expansion. Pipelines are much more effective tools of foreign policy than missiles.

Economic Freedom and the Oil-producing Countries

Many oil fields around the world are headed for depletion. National statistics are unreliable at best, or classified at worst, and national oil companies control up to 80 percent of oil and natural gas reserves. The main problem of oil shortages today is not lack of reserves in the ground, but lack of access above ground.

Over-regulation and a Poor Investment Environment. Laws requiring the government to own and/or control significant shares in oil ventures are common in many oil-producing countries. Over-regulation and economic nationalism prevent international oil companies from owning mineral rights, while weak rule of law and insufficient protection of property rights in many oil-rich regions make multibillion-dollar investments too risky.

In many oil-producing countries, arbitrary laws, failing and corrupt legal systems, selective taxation, conflicting legal codes, and government failure to enforce contracts have created a murky investment environment. Nationalization has a particularly chilling effect. Venezuela destroyed tens of billions of dollars in shareholder value. Russia frightened many investors away by breaking up its major oil company, YUKOS; pushing Shell out of the Sakhalin Island project; and suing British Petroleum's Russian partner TNK for \$790 million in back taxes. Saudi Arabia abandoned its much-touted privatization of natural gas production.

Two-thirds of the world's oil reserves are concentrated in the increasingly unstable Middle East and are controlled by members of the quasi-monopolistic Organization of Petroleum Exporting Countries (OPEC). ¹⁴ Over the years, OPEC has been quick to cut supply and slow to increase production, bringing oil prices to today's high levels. ¹⁵ Most OPEC member countries and other oil producers have high levels of government economic regulation and corruption, as documented in the *Index of Economic*

^{15.} Ariel Cohen, Ph.D., and William Schirano, "Congress Should Lift OPEC's Immunity," Heritage Foundation WebMemo No. 777, June 27, 2005, at www.heritage.org/Research/EnergyandEnvironment/wm777.cfm.



^{14.} The 11 OPEC members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Freedom, published by The Heritage Foundation and *The Wall Street Journal*. ¹⁶ Thus, consumers are effectively paying two premiums on oil—one for security and one for suppliers' economic inefficiency and monopolistic behavior.

The U.S. needs to develop a comprehensive strategy to change the oil investment climate. Such a strategy should involve the Departments of State, Energy, and Treasury and be coordinated by the National Security Council.

Consumer countries, including the G-8 and major oil consumers, especially China and India, should join the G-8 to coordinate positions of the buyers' club. Consumers should use diplomatic and economic means to pressure OPEC and non-OPEC suppliers to liberalize their foreign investment laws, break up state monopolies, and phase out undue government intervention.

Efforts to promote such policies through international financial organizations such as the World Bank and the European Bank for Reconstruction and Development should be increased. Economic assistance should emphasize economic freedom in potential recipients, including a liberal investment climate similar to Millennium Challenge Account requirements.

In many countries, lending institutions are weak, and excessive taxation diverts oil revenues before appropriate investments for future development are made. This limits the funds available to develop new fields and tempers the profit motive to expand production. These anti-business barriers have hindered investors from expanding oil and natural gas supplies, even in the face of surging demand. Oil buyers must coordinate policies to reduce these barriers.

Arms and vital equipment sales should be conditioned on improving the investment climate in the

energy sector. The U.S. should also condition accession to the World Trade Organization on policy changes that facilitate foreign investment.

The U.S. State Department and Departments of Energy and Commerce, as well as international financial organizations such as the World Bank, should champion property rights protection to enhance access to resources and prevent expropriation, unrestricted and fair competition, free markets, business and governance transparency, and political accountability. If applied, these principles will allow a significant increase of oil supply. Specifically, the U.S. should seek full access for international oil companies to mineral rights in OPEC and non-OPEC countries, including the development of oil fields and energy transportation infrastructure. The U.S. also should make the privatization of national oil companies and economic liberalization one of the pillars of the G-8 and the Organisation for Economic Cooperation and Development foreign and energy security policy.

Conclusion

Energy independence, defined as competitive local production of all the energy we need, remains a mirage. It is energy security that we need to accomplish, in which abundant and affordable energy supply is within reach of all Americans. Recognizing the inherent, systemic, and long-term instability of the global oil markets is the first step in addressing the problem the U.S. is facing.

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^{16.} For example, in terms of economic freedom, Iran, Venezuela, and Nigeria were ranked 156th, 152nd, and 146th out of 157 countries, respectively. See Marc A. Miles, Kim R. Holmes, and Mary Anastasia O'Grady, 2006 Index of Economic Freedom (Washington, D.C.: The Heritage Foundation and Dow Jones & Company, Inc., 2006), at www.heritage.org/index.

