**Testimony of**

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*Summary*

Foreign policy considerations should be central to the discussion of U.S. oil and natural gas export policy. The United States has several vital interests at stake in the question of energy exports. First and foremost, open trade and investment globally in energy is important to U.S. vital interests. Barriers to energy trade and investment between major oil and gas rich regions and consuming countries can harm the global economy, leave the U.S. and its allies subject to energy blackmail, and create artificial shortages of vital energy supplies. U.S. energy trade in particular can enhance American power and influence by strengthening our ties to important allies and trading partners and allowing us to help our allies in times of market instability while at the same time weakening the petro-power of some of our adversaries such as Iran and Russia. Additionally, by improving our balance of trade, energy exports not only give the United States an upper hand with China, which will be more highly dependent on foreign oil imports than we will, but also allow the United States the luxury to augment its strong influence as a donor to global institutions.

Finally, energy exports are an important part of our free trade obligations. The United States already exports natural gas and condensate to Mexico and Canada and has commitments

to free trade with those important neighbors under the North America Free Trade Agreement (NAFTA). The United States has a free trade agreement with South Korea under the Republic of Korea Free Trade Agreement and with Central American states under the Central American Free Trade Agreement (CAFTA).

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Testimony

The rapid growth of oil and natural gas production from unconventional shale resources in the United States has reopened the debate on U.S. oil and natural gas export policy. Foreign policy considerations should be central to the discussion of this issue. To date, the debate in the United States regarding U.S. liquefied natural gas (LNG) exports has focused mainly on domestic economic aspects. Today, I will discuss the national security and foreign policy benefits of the United States promoting an open energy trade policy that permits exports of natural gas, condensate, refined petroleum products and possibly under specified conditions, crude oil.

The United States has for many decades been the leading nation in championing open markets and free trade in energy. *Open trade and investment in energy is important to U.S. vital interests* for many reasons. First and foremost, artificial restrictions on energy flows can be a source of international conflict and, in fact, has been a major factor contributing to armed conflict in modern history. Moreover, the United States, by virtue of both its superpower role and its position as the largest oil consuming country, has a direct interest in preventing energy supply from being used as a strategic weapon. Finally, barriers to foreign investment in energy resources in key countries generally contribute to supply constraints, leading to rises in global prices and potentially harming economic growth in major oil consuming countries such as the

United States and its key industrialized trading partners. For these three reasons, the United States should continue to actively support open markets and free trade in energy and to do so, it cannot restrict its own energy exports.

Energy trade can also be used to *strengthen our ties to important allies and trading partners* and thereby enhance American power and influence. For example, U.S. LNG exports from the Gulf coast could be an important strategic back-up role to shaky Russian or Middle East gas supplies, for example, much the way the U.S. served as an oil swing producer back in the 1960s, rendering an Arab oil boycott during the 1967 Arab-Israeli war infeasible. U.S. Asian allies Japan and South Korea are seeking flexible U.S. Gulf coast LNG contracts for reasons of economic and geopolitical leverage. Our ability to serve as a source for critical swing energy supplies enhances our importance to our energy trading partners in other geopolitical and economic spheres and *allows us to help our allies in times of market instability*.[1] It would, for example, constrain Russia's ability to use its energy supplier role as a wedge between the United States and its European allies.

As American shale production expands from natural gas to oil, the geopolitical benefits will mushroom both by *improving U.S. financial strength and by eliminating U.S. vulnerability to economic blackmail*. The upshot of shale oil will be to reverse the course of history and roll back the clock to pre-1973. Oil producing states will no longer be able to use the lever of a possible energy supply cut-off to America to pressure Washington to adjust its foreign policy. If domestic shale oil abundance someday more closely matches shale gas abundance and the U.S. has no imports to replace, then we will have more discretion on when and how to use the

[1] It is easy to imagine the expansion of American power if its natural gas companies could gear up to supply LNG to a European country cut off by Russia, such as happened in the winter of 2006. If the U.S. can become an energy supplier of last resort, its geopolitical importance will rise significantly along with its diplomatic freedom of movement.

Strategic Petroleum Reserve. In such circumstances, a President could consider using the SPR to either loan oil to other countries for geopolitical aims (for example, to *counter the economic blackmail of the "oil weapon"* against an allied country) or to provide extra oil into the market to influence global prices, should they be negatively affecting the wellbeing of the global economy. In this regard, U.S. energy exports will *weaken some of our adversaries such as Iran and Russia*. U.S. shale gas has already played a key role in weakening Russia's ability to wield an energy weapon over its European customers by displacement. By significantly reducing U.S. requirements for imported liquefied natural gas (LNG), rising U.S. shale gas production has increased alternative LNG supplies to Europe in the form of LNG displaced from the U.S. market, *limiting some of Russia's power*. It has also already *curbed Iran's ability to tap energy diplomacy* as a means to strengthen its regional power or to buttress its nuclear aspirations by eliminating the need for Iranian natural gas to potential importing customers by creating surpluses of alternative supplies.

Energy exports also *improve our balance of trade*. The health of the U.S. economy and fate of the U.S. dollar come under pressure when rising oil prices raise our massive oil import bill, worsening the U.S. trade deficit.[2] Such economic pressures are multiplied when we are forced by oil dependence to deepen our military commitments in the Middle East, thereby similarly adding to the U.S. deficit. All this weakens the United States relative to China, which holds a large chunk of U.S. indebtedness and free rides off expensive U.S. naval activities to guarantee the free flow of oil from the Persian Gulf. Over time, shale development will reverse this strategic and economic disadvantage. As the years pass, it may well be the Chinese economy that is more exposed than the United States to Middle East developments. Citibank estimates that

[2] For a detailed discussion of the link between the U.S. dollar and oil prices, see Amy Myers Jaffe and Mahmoud El-Gamal, Oil, Dollars, Debt and Crises: The Global Curse of Black Gold, Cambridge, UK: Cambridge University Press, 2010

rising domestic shale oil and gas production, by reducing oil imports and keeping "petro-dollars" inside the U.S. economy, will reduce the U.S. current account deficit by 1.2 to 2.4 percent of gross domestic product (GDP) from the current value of 3 percent of GDP. Such a development would have implications for the U.S. dollar, potentially helping it appreciate over time. Energy exports would enhance this trend by adding gains to the balance of trade. To the extent that energy exports improve our global financial footing, it will not only *give us an upper hand with China*, which will still be highly dependent on foreign oil imports, but also allow the United States the luxury to regain its strong influence as a donor to global institutions such as the World Bank and United Nations, again enhancing our national power and influence.

Finally, energy exports are an important *part of our free trade obligations* to important neighbors such as Mexico and Canada as well as more distant long-standing allies such as South Korea. U.S. law requires the U.S. Department of Energy (DOE) to review and approve any natural gas exports to countries with which the United States does not have a free trade agreement. Current rule making requires that exports to our free trade partner countries be approved expeditiously. For nations not covered by applicable free trade agreements, the review is supposed to lead to approval unless the project is determined to "not be consistent with the public interest." As a practical matter, the United States is already an exporter of domestic natural gas. The U.S. natural gas exports to Mexico reached 1.69 bcf/d in 2012. Canada has also been a major buyer of U.S. condensates. U.S. pipeline gas exports to Mexico are important to Mexico's economic health and to border relations and therefore it is unlikely the United States would ever consider cutting off Mexico's gas trade with us. South Korea now holds a Free Trade Agreement (FTA) with the United States. South Korea has indicated its desire to import U.S. Gulf coast LNG. Under normal economic conditions, it would not be in the U.S. economic and foreign policy interest to fail to honor our free trade obligations to South Korea while continuing

to honor our obligations to Mexico. By extension, the United States, as an established exporter of natural gas, should not be turning away as close an ally as Japan, which also has expressed an ardent interest in importing U.S. natural gas and currently faces a fuel crisis in the aftermath of the Fukushima nuclear disaster. Several Asian energy importers have made it clear that they would prefer the security and pricing of our multi-producer, competitive liquid market as a source of LNG supply to other alternative exporters. Since U.S. trade with Asia is important to our economic health, on balance it would not be in the U.S. interest to turn down Asian trading partners wanting to expand already massive trade to include natural gas, especially given that a preponderance of analysts have concluded that U.S. shale resources are large enough to minimize the pricing impact of LNG exports from the United States. This logic could also apply to refined petroleum products and condensates, which are already an important part of our current foreign trade.[3]

Thus, I would argue that these many foreign policy considerations must be taken into account in any review on the question of the advisability of U.S. energy exports. We must consider all aspects of the implications of the energy export question on our national security and foreign policy interests. To focus only on the uncertain impact that exports might have on the U.S. manufacturing sector or even on the global energy pricing is foolhardy, given the complexity of interactive forces that will influence prices in the long run. Had the industry now testifying about long-term natural gas prices been able to forecast correctly, they wouldn't have

[3] To protect U.S. consumers against volatility in fuel pricing due to shifting levels of global demand for refined petroleum product and/or natural gas exports, the United States should require producers and refiners to hold reasonable minimum inventories to guard against temporary domestic shortfalls of supply or seasonal volatility. Such minimum product inventory standards are already used successfully in Europe and Japan to enhance energy security and protect domestic markets in the event of an unusual event such as the Fukushima nuclear accident. In fact, the United States was able to weather Hurricane Rita and Katrina partly by borrowing gasoline from required European minimum inventory stockpiles. Shale derived natural gas liquids (NGLS) production are projected to outpace the ability of the U.S. market to absorb incremental output at least until 2018. Thus, exports will be needed to alleviate storage containment problems that could be associated with U.S. shale oil production. Already, natural gas is being flared in certain locations. For more details, see Alan Troner, "Natural Gas Liquids in the Shale Revolution" available at http://bakerinstitute.org/programs/energy-forum

offshored plants earlier in the 2000s when natural gas prices rose temporarily. Rather than second guessing price impacts which remain highly uncertain, we should widen the export debate to consider U.S. global priorities as well as domestic economic concerns.

A Backgrounder on Implications of Energy Exports for U.S. Global Priorities

Exceedingly high oil prices in the 2000s have invited massive investment by private capital in both oil exploration outside of OPEC countries, particularly in unconventional resources in North America, and in alternative sources of energy. At the same time, the financial pressure of oil import bills on major economies has similarly triggered consuming countries to re-regulate energy markets to include targets or incentives for energy efficiency, which are about to take a giant bite out of oil demand gains. In the case of the United States, the combination of both trends has been nothing short of stunning.

The so-called "shale revolution" has unleashed an enormous amount of oil and gas activity in the United States. Shale gas production in the United States has increased from virtually nothing in 2000 to more than 10 billion cubic feet per day (bcfd) in 2010. Gross natural gas output in the U.S. hit 2.5 trillion cubic feet (tcf) this past summer, a record high. Shale gas production could more than quadruple by 2040, accounting for well over 50 percent of total U.S. natural gas production over the next two decades.[4] *Tight oil,* that is unconventional oil from shale structures, is developing at an extraordinarily rapid rate in the United States as well, reaching more than 1.5 million barrels a day (b/d) and end 2012, or 1.6% of global production.

[4] See Kenneth B. Medlock III, Amy Myers Jaffe, and Peter R. Hartley, "Shale Gas and U.S. National Security" (working paper, James A. Baker III Institute for Public Policy, Rice University, Houston, TX, July 2011).

U.S. analysts are now projecting that U.S. oil production could rise significantly over the next decade as increased drilling in shale formations and deep water Gulf of Mexico translates into higher domestic output. Estimates range from an increase on of 3 million to 10 million b/d of oil and natural gas liquids production from shale by 2020, with some analysts projecting that the United States could become an exporter of natural gas liquids over time.[5] Citibank estimates that U.S. deep water production could hit 3.8 million b/d by 2020, up from 1.3 million b/d in 2011. The United States has also mandated a doubling of biofuels production over the same period. While it is unclear whether the rate of drilling in the United States will be sufficient to eliminate completely the need for foreign imports of oil, a combined approach that includes both continued drilling for shale and accelerated time lines for higher U.S. average corporate efficiency standards for vehicles to 54.5 miles per gallons by 2025 could truly leverage the potential to eliminate the roughly 8.5 million b/d of crude oil imported into the U.S. at present. The new car efficiency standard should shed between 4 to 6 million b/d of oil requirements in the next decade or two. Canadian oil sands, which could continue to grow in the years ahead at a steady pace of some 200,000 b/d per year for at least a decade if not two decades should export infrastructure bottlenecks be relieved (an increase of 2-mm b/d in this decade), would add additional flexibility. Thus, continued U.S. dependence on oil imports from Middle East or OPEC looks highly doubtful at this time.

Already, prolific U.S. shale gas resources, which are estimated to be as high as 862 tcf, are dramatically changing the U.S. economic and import outlook, with geopolitical consequences.[6] Shale gas production in the United States has increased from virtually nothing in 2000 to more than 10 billion bcfd in 2010. Gross natural gas output in the U.S. hit 2.5 tcf this

[5] Michael Levi, "Think Again: The American Energy Boom Foreign" *Policy Magazine* , July/August 2012 http://www.ourenergypolicy.org/wp-content/uploads/2012/08/0_New_14413.pdf
[6] Energy Information Administration Annual Energy Outlook, 2011, http://www.eia.gov/analysis/studies/worldshalegas/

past summer, a record high. Shale gas production could more than quadruple by 2040, accounting for well over 50 percent of total U.S. natural gas production over the next two decades.[7] As Citibank noted in a recent study, the "shale gas revolution drives paradigmatic shifts across sectors" and together with other unconventional resources will transform North America into a "growing hydrocarbon net exporting center, with the lowest natural gas feedstock costs in the world, supporting thriving exports of energy-intensive goods from petrochemicals to steel."[8]

The prospects of rapidly expanding domestic natural gas supplies have led to forecasts of inexpensive natural gas prices for the foreseeable future. In North America, breakeven prices for wells drilled in some of the more prolific shales are currently estimated to be as low as $2 to 3 per thousand cubic feet (Mcf), with a large majority of the resource accessible at below $6. Ten years ago, costs were significantly higher. As firms continue to make cost-reducing innovations, greater quantities of the shale resource will likely become both technically and economically viable. In March 2012, the price of natural gas fell below $2 per Mcf for the first time since 1999.

All this cheap natural gas looks poised to strengthen the U.S. economic and diplomatic position vis a vis China and Russia. U.S. shale gas has already played a key role in weakening Russia's ability to wield an energy weapon over its European customers by displacement. By significantly reducing U.S. requirements for imported liquefied natural gas (LNG), rising U.S. shale gas production has increased alternative LNG supplies to Europe in the form of LNG displaced from the U.S. market. The geopolitical role of U.S. natural gas surpluses in

[7] See Kenneth B. Medlock III, Amy Myers Jaffe, and Peter R. Hartley, "Shale Gas and U.S. National Security" (working paper, James A. Baker III Institute for Public Policy, Rice University, Houston, TX, July 2011).
[8] Energy 2020: North America, the New Middle East? Citi GPS: Global Perspectives & Solutions, March 20 2012

constraining Russia's ability to use its energy supplier role as a wedge between the U.S. and its European allies[9] could further weaken over time, to the extent that the current Administration stays the course with approvals of U.S. LNG export terminals. U.S. LNG exports from the Gulf coast[10] could be an important strategic back-up role to shaky Russian gas supplies with their potentially political strings attached, much the way the U.S. served as an oil swing producer back in the 1960s, rendering an Arab oil boycott during the 1967 Arab-Israeli war infeasible.[11] U.S. Asian allies Japan and South Korea also are seeking flexible U.S. Gulf coast LNG contracts for reasons of economic and geopolitical leverage.

As American shale production expands from natural gas to oil, the geopolitical fall out will also mushroom both by improving U.S. financial strength and by eliminating U.S. vulnerability to economic blackmail. The upshot of shale oil will be to reverse the course of history and roll back the clock to pre-1973. Oil producing states will no longer be able to use the lever of a possible energy supply cut-off to America to pressure Washington to adjust its foreign policy. There has even been talk that the U.S. could become an oil exporter. The idea of crude exports "should not automatically be taken off the table," U.S. Energy Information Administration director Adam Sieminski told a Washington DC-based conference last summer.[12]

Even if U.S. crude oil exports never come to fruition, a self-sufficient United States will have more flexibility in how it manages the roughly 700 million barrels in the Strategic

[9] Edward L. Morse and Adam J. Robinson argue in their article, "Growing Pains: Russia's New Muscle" *Aspenia* 32-4, February 2007, p. 110-119, that Moscow has used energy as a means to pull European states away from close alliance with the United States by brief demonstrations that reliability of supply could be subject to geopolitical considerations. Russian energy "diplomacy" is mentioned in EU discussions as a factor in slowing the eastward expansion of NATO to Ukraine and elsewhere.

[10] Many forecasters anticipate U.S. exports of natural gas, and some, including the EIA, anticipate oil exports in the coming decades.

[11] For a detailed account of the U.S. historical swing producer role, see Daniel Yergin's The Prize, New York, New York: Simon and Schuster, 1991, chapter 27 through 28.

[12] Margaret Ryan, "U.S. Crude Exports Could Make Sense Says EIA Head" aolenergy.com June 28, 2012

Petroleum Reserve (SPR). Although many think of the SPR as a wartime stash, it was in fact created to be a tool of statecraft to be used to redress the bargaining imbalance to allow the United States as a major oil importer greater maneuver in its foreign policy and to prevent global economic damage from undue manipulation of oil markets. The size of the SPR was determined by the premise that the U.S. would have to replace some or all of its oil imports during a crisis. But if the U.S. has no imports to replace, then it will have more discretion on when to use the SPR to either loan oil to other countries for geopolitical aims or to provide extra oil into the market to influence global prices, should they be negatively affecting the wellbeing of the global economy. The United States could even decide to sell off some of the SPR to reduce its deficit, given that the average purchase price for the stockpile is $29.76, potentially leaving a lot of room for profit-taking. At a minimum, over time the U.S. will need to review its SPR policy, which already lacks a clear mandate for when a release is triggered.[13]

Politicians and experts alike will undoubtedly point out that if the U.S. becomes an exporter, such exports could put U.S. consumers and industry at risk during times of a supply outage or crisis. But such risks are easily remedied as a recent Citibank report notes. "Citi GPS Energy 2020: Independence Day" argues "…in case of an international emergency or a supply disruption, exports can be curtailed and domestic prices in theory be significantly cushioned from international shocks. Indeed, the government could restrict or even ban exports in times of emergency…" While Citi notes that the latter is an extreme that "would likely violate international trade treaty obligations," it is certainly a safeguard that could be used in extreme circumstances such as time of war. Moreover, any U.S. policy to temporarily end exports would, except in times of war, likely be made in the context of U.S. participation in a global response to

[13] For more discussion about the problems of the SPR trigger mechanism, see Amy Myers Jaffe, America's Real Strategic Petroleum Reserve, at http://www.foreignpolicy.com/articles/2012/08/24/Saudi_Arabia_Strategic_Petroleum_Reserve

supply outages and therefore would be just one element to an organized international response to protect the U.S. economy and those of our allies.

*Rising shale and the U.S.-China Rivalry*

The U.S. shale boom has other geopolitical benefits as well. Rising American shale oil and gas production will strengthen the U.S. hand relative to China. The health of the U.S. economy and fate of the U.S. dollar come under pressure when rising oil prices raise our massive oil import bill, worsening the U.S. trade deficit.[14] Such economic pressures are multiplied when we are forced by oil dependence to deepen our military commitments in the Middle East, thereby similarly adding to the U.S. deficit. All this weakens the United States relative to China, which holds a large chunk of U.S. indebtedness and free rides off expensive U.S. naval activities to guarantee the free flow of oil from the Persian Gulf. In fact, China may feel it benefits strategically if the U.S. is bogged down in Mideast conflicts, a possible explanation for its support of Iran and Syria. China has emerged as Iran's principal arms suppliers, with transfers including cruise missile and ballistic-missile capabilities.[15] More recently, China seems to be hedging its bets with discussions of ballistic arms sales to Saudi Arabia.[16] The utility of arms sales to various Middle East players is sometimes described in China as "seeking stability" through balance of power but to the extent that such military support forces Washington to wade deeper into conflicts in the Middle East, China can be better assured that the U.S. will be constrained to intervene in China's own Asian backyard. Moreover, costly repeated U.S. military

[14] For a detailed discussion of the link between the U.S. dollar and oil prices, see Amy Myers Jaffe and Mahmoud El-Gamal, Oil, Dollars, Debt and Crises: The Global Curse of Black Gold, Cambridge, UK: Cambridge University Press, 2010
[15] Ibid
[16] America's Real Strategic Petroleum Reserve, Amy Jaffe, Foreign Policy, August 24, 2012 http://www.foreignpolicy.com/articles/2012/08/24/Saudi_Arabia_Strategic_Petroleum_Reserve

intervention in the region has weakened the U.S. economy considerably by substantially adding to the U.S. deficit and also indirectly through higher costs for oil. Notes John Garver:

> "A strong Iran resistant to U.S. dictates and at odds with the United States would also force Washington to keep large military forces in the region, limiting the ability of the United States to concentrate forces in East Asia, where China's core interests lie. The 9-11 attacks on the United States were a strategic windfall for China, diverting U.S. attention away from China and East Asia toward the Middle East and Islamic World. That the United States bogged itself down in protracted wars in Afghanistan and Iraq was a further blessing for Bejing. If Washington now were to wade deeper into conflict in the Middle East –this time with Iran—the chances for China's successful rise without having to confront the United States would increase. In this regard, it would not benefit China to help the United States coerce Iran into de-nuclearization and corresponding docility."[17]

Over time, shale development will reverse this strategic and economic disadvantage. As the years pass, it may well be the Chinese economy that is more exposed than the U.S. to Middle East developments. Citibank estimates that rising domestic shale oil and gas production, by reducing oil imports and keeping "petro-dollars" inside the U.S. economy, will reduce the U.S. current account deficit by 1.2 to 2.4 percent of gross domestic product (GDP) from the current value of 3 percent of GDP. Such a development would have implications for the U.S. dollar, potentially helping it appreciate over time.

*U.S. Energy Exports and Global Energy Governance*

Open trade and investment in energy is important to U.S. vital interests. As mentioned above, barriers to energy trade and investment can harm the global economy, leave the U.S. and its allies subject to energy blackmail, and create artificial shortages of vital energy supplies. From the perspective of the United States and its important trade partners in the developed world, global energy trade and investment policy should facilitate the development of natural resources to ensure that supplies can grow in line with demand at fairly stable prices. There is no

[17] John W. Garner, Is China Playing a Dual Game in Iran? Washington Quarterly, Vol. 34, No 1, 2011, p. 75-88

doubt that at least some of the rapid increase in world oil prices during the years 2005-2008 is the result of insufficient investment in oil producing capacity, in large measure due to barriers to open trade and investment in energy resources in the Middle East, Russia and to some extent China.

One of the key barriers to adequate investment in global oil reserves is the concentration of control of the world's largest reserves in the hands of national oil companies. The concentration and control of access to large national reserves by national monopolies eliminates the possibility that local competition of firms will enhance the efficiency of all investors and promote an adequate pace of investment, with private firms taking a role to supplement government investment. In many countries, governments have been under increasing pressure to reallocate revenue generated by the monopoly NOC(s) to cover social investments in education, health, direct food and fuel subsidies to populations, and infrastructure. Some governments have used an increasing portion of NOC revenues to cover federal budget outlays or to repay foreign national debt or to provide social welfare subsidies to the population. As a result, NOCs have diverted resources away from reinvestment in oil exploration and development to meet these more non-commercial goals. In many cases, such as Mexico and Venezuela, this policy has led to sharp declines in oil exports in recent years. In other cases, such as Russia and Kuwait, it has constrained the pace of a potential expansion in oil exports. Thus, the concentration of control in resource development by state monopolies instead of having such development be open to competitive market forces contributes to underinvestment in oil exploration and development, even in the face of global shortages and rising prices.

Another consequence of the concentration of control of resource development by state-controlled NOCs is that it strengthens the monopoly power of OPEC. From the perspective of the larger OPEC oil producers, one advantage of creating the trade and investment barrier of NOC-

control in the first place is precisely that it makes it easier for OPEC member countries to control the pace of investment and the expansion of oil production capacity, thereby strengthening OPEC's control on global oil prices. OPEC can simply reduce investments in future capacity as a means to artificially raise global oil prices for some period of time. OPEC's goals as an oil producer cartel are not in alignment with U.S. economic or strategic interests. It is clearly in the U.S. interest to promote open and free trade in energy in countermand to such OPEC practices to constrain needed oil supplies.

Over the past thirty years, the policy of the United States and international organizations such as the International Monetary Fund and the World Bank has been to promote and encourage the privatization or partial-privatization of state-owned energy firms in many developing countries to ensure a freer flow of energy to the local and global economy and to help countries better align their national balance of payments and foreign debt. The policy, where successful, has had the effect of transforming many of these state firms, such as Petrobras and China's CNOOC, into more aggressive, commercially oriented global competitors. Trade agreements that aim for fair competition and adequate investment in upstream energy sectors are squarely in the U.S. interest and in the commercial interests of U.S. energy firms which are leading globally in technology and investment in oil and gas exploration. As such, emphasis on free trade requires the United States also to keep its borders open for energy exports and investment in our domestic resources by foreign companies. Foreign investment in U.S. domestic resources has contributed to rising U.S. domestic production by injecting additional capital spending into the U.S. market. The U.S. Energy Information Administration (EIA) tallies that 20 percent of the $133.7 billion in investment in U.S. shale plays between 2008 and 1012 included joint ventures by foreign companies. As a large consuming nation, the United States should insist that cross investment be

a critical part of an overall framework that keeps all markets open to global trade and investment, including access to U.S. markets, in non-oil commodities, financial services and other goods.

*Energy Independence and a More Assertive U.S. Foreign Policy?*

Once the energy equation for the United States shifts in earnest, it is possible that America will return to an even more assertive foreign policy. To the extent that rising domestic energy helps the U.S. regain some of its financial muscle, fiscal and budgetary constraints that now prevent the U.S. to take on too many international endeavors will be removed. That will not only give the U.S. military more sway with the U.S. public when it feels intervention abroad is necessary or even just strategically advantageous. It will diminish the influence of oil-related geopolitical considerations, which currently loom high on the list of factors that inhibit U.S. freedom of movement on the world stage today. Just as French President Nicholas Sarkosy was the head of state able to "speak to power" to energy-rich Russia after Moscow's invasion of Georgia given France's enviable reliance on its own nuclear energy to fuel its economy, the U.S. President and Secretary of State will be more greatly enabled to speak for the global community on matters that impose burdens on major oil exporting states. That could cover any number of topics from human rights and democracy promotion in Bahrain or around the oil-rich Persian Gulf to a global climate deal. The United States will be able to communicate with more confidence and less constraints than when its own oil vulnerabilities need to be taken into account.

But ironically, greater U.S. energy self-sufficiency will have its own built-in disadvantages as well with exactly the same petro-states as its current energy vulnerability serves. Until recently, the U.S. market had been a giant and growing destination for sales of

petroleum and as such, oil producers had to care whether they could access U.S. consumers. Between 1990 and 2000, the growth in U.S. oil demand represented close to 60 percent of the rise in OPEC's traded oil production. The importance of the U.S. market meant that American-led oil sanctions against a country had real and economically biting consequences. For example, Libya's Qadaffi, it is said, turned over his weapons of mass destruction because he considered access to the U.S. market and oil and gas equipment increasingly important to the possibility of an LNG industry. Over time, oil sanctions might be a less effective tool in U.S. statecraft, as more and more production is sold eastward to emerging economies of Asia, which will be less inclined to follow U.S. leadership any way but especially where their energy supplies are concerned. This problem was already apparent in Washington's difficulty to get Asian buy-in to its bid to tighten Iranian oil sanctions this past summer.

As producers look to markets other than the U.S. to sell their oil exports and refined products from refining and petrochemical plants, the United States will also lose some of its prerogative to dictate environmental standards to other countries. In the past, the importance of access to the large and lucrative U.S. energy market meant that environmental specifications dictated in the United States would have to be followed by any seller who might want to send a cargo to America. As the U.S. market becomes more and more self-sufficient, oil exporters may decide it isn't worth the extra expense to invest in equipment to meet U.S. environmental specifications. That could be bad news for the ambitious state of California which is trying to dictate that producers clean up the carbon emissions for their oil production and refining to market to the state. California had hoped that its low carbon fuel standard would impact producers not just in the state but have broader impact on the operations of the global oil industry generally as well. California's low carbon fuel standard will likely still influence Canadian oil sands producers who will want to maintain access to all U.S. markets, but sellers from Nigeria

and the Middle East may be less inclined to worry about U.S. standards if the vast majority of their sales are going to wind up in Europe and Asia.

And while the U.S. will lessen its vulnerability to global oil shocks, it cannot eliminate impacts altogether, given the globalized nature of commodity markets. The U.S. will still have to concern itself with how international oil crises raise oil prices all around the world, including inside the U.S., since U.S.-based consumers will have to pay the same high oil prices as everyone else. Even to the extent that rising energy prices helps the economy of a wider number of U.S. domestic states/regions than in the past -- offsetting some of the employment and output effects of an oil price shock -- the overall U.S. economy will still be negatively affected by global impacts.[18] And the U.S. will still have to worry about what an oil cutoff would mean for its allies and trading partners. Even if the U.S. can weather an oil supply crisis better than most as its own domestic production rises, its economy will still be hard hit by the negative impact on everyone else. Saudi Arabia has learned that lesson the hard way both in 1979 and again in 2008.

*When OPEC's Main Target Would be China*

As energy efficiency and alternative energy take hold across the industrialized world, oil consumption will continue to fall in the OECD, most notably in the United States, in the years ahead. This trend could potentially limit OPEC's influence over the West over time and shift any burden of OPEC's price setting policies more squarely on emerging Asian countries such as China and India.

[18] Mine K. Yucel, Economic Opportunities and Vulnerabilities, Presentation to the Council on Foreign Relations, "Understanding the American Oil and Gas Boom" October 18-19,2012

U.S. oil imports are already seeing substantial declines, falling over 4 million b/d since 2007. OPEC sales to the U.S. have already been among the hardest hit, with West African OPEC members like Nigeria and Angola seeing significant drops. In the future, even Venezuela and Middle East producers are thus likely to find themselves challenged in maintaining their foothold in the United States.

As discussed, OPEC's ability to use oil sales as leverage to adversely influence the United States will be greatly reduced. The U.S. National Intelligence Council in its recent four year survey to policy-makers noted that U.S. shale production might dent OPEC's influence over global oil prices. While this might be overstated, clearly OPEC's influence over the U.S. will be reduced. While the U.S. and global economy will still be sensitive to oil price shocks, the United States as a large oil and gas producer and exporter will receive a compensating offset of higher energy sector revenues from any OPEC cutback. The United States will also be able to target its own exports to allied countries in Europe or Japan, should they be threatened with a supply cutoff by OPEC. Instead of being able to target the U.S. and constrain its superpower prerogatives, the impact of OPEC policy changes will fall more squarely in Asia and in particular on China.

By contrast to expectations that U.S. oil demand will continue to fall, projections are that Chinese oil demand will rise by close to 8 million b/d to 19 million b/d by 2040 as the number of cars on the road in China expands exponentially with the country's continued economic growth and development.[19] At present, China roughly 50 percent of China's oil imports come from the Middle East. China's dependence on Middle East oil is expected to continue to expand in the

[19] Kenneth Medlock B. III, Ronald Soligo and James Coan, 2011. "Vehicle Stocks in China: Consequences for Oil Demand." Baker Institute working paper available at http://bakerinstitute.org/publications/EF-pub-RiseOfChinaMedlockSoligoCoan-120211-WEB.pdf

coming decades, forcing it to rely on the U.S. Navy to protect the free flow of oil from the Middle East. As at the same time the U.S. ceases to be a major oil importer, it will almost certainly lower political will in the United States to finance singlehandedly the protection of sea lanes from the Persian Gulf. Such a scenario would almost certainly alter the dynamic of the Sino-U.S. dialogue regarding the Middle East and possibly change American public attitudes regarding Chinese free riding off the United States' expensive commitment to guarantee the free flow of oil from the Persian Gulf to Asia. Moving forward the adverse effect of a disruption in oil supplies and subsequent oil price increases could have a more deleterious impact on China's trade balance as the major user of Middle East oil than it would on the United States' trade deficit, since the U.S. oil import bill will be greatly reduced. That should give Washington more leverage with Beijing to insist on a more constructive dialogue on not only Middle East conflict resolution specifically, but on military matters more generally.

Given China's long term interests in Middle East oil and gas supply and its economic exposure to the fate of the U.S. economy, it remains to be seen if China's present path of providing material and diplomatic support to Iran and into other diplomatic hot spots will continue to make sense as time wears on. Already, Chinese strategists are beginning to worry about U.S. foreign policy shifts, as the U.S. becomes less dependent on imports. And China's "going abroad policy" of foreign direct investment in oil in places like Sudan, Libya, Iran and Venezuela, is increasingly putting its citizens and interests in harm's way. The shortcomings of China's "going abroad" strategy have demonstrated that a strong international presence requires a strong military. Beijing is becoming increasingly dependent on the foreign military security already present in the Middle East due to its growing reliance on Gulf oil. Regardless of nationalistic elements of its public, Chinese leaders must face the fact that the country does not

have the naval resources to become actively involved in defending those producers who are its main crude suppliers. Moreover, it is not clear whether China would want to take on that support role even if it had the adequate resources. Traditionally, China has devoted its military resources to protecting its interests in its own backyard, including the South China Sea and Taiwan Strait, largely relying on U.S. military presence to protect its interests abroad, and particularly in the Middle East.[20]

The good news is that China, now finding itself mired in more energy-related foreign diplomacy than it bargained for, is more inclined to act in concert with other members of the international community. As China becomes a more engaged stakeholder in the international arena, the United States must prepare itself for increased global power sharing. But China's far-flung involvement in unstable regions also means that it may need troops to guard foreign oil and gas installations and naval craft to effect evacuations in emergencies. Even this modest increase in China's foreign military profile will require greater consultation with the United States, first, to avoid potentially dangerous misunderstandings and, second, to create the groundwork for cooperation during possible crises. Down the road, an alternative Chinese response to this situation could be to increase investment in Chinese force projection.

To manage China's oil-and-military link, the United States should fine-tune the messaging of its diplomacy with China to include discussion of a roadmap to elevate communications between the U.S. and Chinese military. The nature of conflicts in the Middle East and Asia calls for a more pro-active, high level strategic dialogue between the U.S. and Chinese militaries. At present, this dialogue is more tactical in nature. Even at the height of the

[20] "The Vital Triangle," Jon B. Alterman, Ph.D., Director, Middle East Program, Center for Strategic and International Studies, presented at The Woodrow Wilson Center for International Scholars conference on China and the Persian Gulf, July 12, 2010, http://aic-background.conflix.org/images/5/57/Securedownload_%281%29.pdf

Cold War, such consultative lines of communication between top U.S. and Russian military brass was critical to avoiding escalation of conflicts in the Middle East to avoid dire global consequences. The same utility would be beneficial in the Sino-U.S. relationship. Sharply different perspectives on even the vocabulary of "stability" in the Chinese and American cultural lexicon raises risks of unintended misunderstanding that is thwarting better cooperation in the Middle East even when Chinese and American strategic interests are aligned. And where Chinese and American interests are not aligned, the risks of misinterpretation and miscommunication are high with potentially serious consequences.

For OPEC, it remains unclear what geopolitical benefits it would get when its oil weapon would unleashed more pain on Beijing (and maybe someday India) than on the United States. The answer to that question will partly rely on how China's foreign and strategic policy develops over time and whether Middle East oil exporters or Russia will find elements in China's foreign policy that they would like to influence. One could imagine that China's extensive arms sales might become a target of petro-power ire in the future, just as U.S. military aid to Israel had it fall amuck of Arab interests in the 1970s. But China's naval force projection will likely be limited for at least two decades, leaving less to counterbalance through an "energy weapon."

## Conclusion

As the United States considers the implications of an improving energy balance, it will be faced with important questions about its priorities for continued global leadership. Regardless of whether the U.S. imports any oil from the Middle East, its responsibilities to police the sea lanes will remain a function of its role as a global superpower. And having more oil will not relieve the U.S. from caring about the impact that a global oil crisis could have on its economy, not only

because prices to consumers will rise everywhere, including in the United States, but also because economic damage from a crisis will harm the U.S. economy indirectly via its substantial trade with other countries who will remain major oil importers. Thus, worries among U.S. allies that an energy independent United States might abandon the Middle East are clearly overstated. But an energy independent United States will indeed be freer to engage in an international agenda of democracy promotion and human rights, which might weaken the relationship the United States has with authoritarian governments in major oil producing states. The consequences of that could still have profound long term impacts on the global oil situation.

As the United States moves to recalibrate its own understanding of its national interests when its own oil importation from outside the Americas shrinks, it will have to think carefully about the consequences of opportunities for changes in foreign policy. The United States could gain striking geopolitical (and economic) benefits from having the flexibility to export of oil and gas to its allies both in normal times and in times of crisis. The large U.S. Strategic Petroleum Reserve could be part and parcel of a new means of engagement on the arena of international energy diplomacy. We have already opted to release the strategic petroleum reserve to take oil price pressures off of a financially struggling Europe during the Libyan crisis and simultaneous start of oil sanctions against Syria. It has never been clear why the U.S. had not done more in the past to eliminate the energy security and global economic risks posed by OPEC. But the United States could soon be in a position to recapture the status it had in the 1960s when the U.S. was able to play a swing producer role to stabilize the oil market, in the face of Middle East conflicts and other geopolitical events.

In addition, the United States will want to increase its diplomatic efforts to engage other major oil importing countries into a dialogue about burden sharing. The United States has

already set this path in motion by promoting joint operations with NATO in Libya and elsewhere in Africa.  But a stop in Beijing by senior U.S. military brass might become increasingly necessary as the United States navigates its way to energy independence. U.S.-China relations regarding the Middle East and oil have been plagued by mistrust and rivalry. The challenge for U.S. diplomacy will be how to accommodate legitimate Chinese interests while at the same time countering China's willingness to leverage Middle East conflict to the U.S. disadvantage. A proper analysis of how the energy position of Washington and Beijing will change over time can help policy makers on both sides to map a more cooperative framework where possible and at least to provide a more productive dialogue where differences in interests cannot be resolved.