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AMERICAN ENERGY EXPORTS: OPPORTUNITIES FOR U.S. ALLIES AND U.S. NATIONAL SECURITY

HEARING

BEFORE THE

SUBCOMMITTEE ON MULTILATERAL INTERNATIONAL DEVELOPMENT, MUTILATERAL, INSTITUTIONS, AND INTERNATIONAL ECONOMIC, ENERGY, AND ENVIRONMENTAL POLICY

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AMERICAN ENERGY EXPORTS: OPPORTUNITIES FOR U.S. ALLIES AND U.S. NATIONAL SECURITY

TUESDAY, JUNE 23, 2015

U.S. SENATE, SUBCOMMITTEE ON MULTILATERAL INTERNATIONAL DEVELOPMENT, MULTILATERAL INSTITUTIONS, AND INTERNATIONAL ECONOMIC, ENERGY, AND ENVIRONMENTAL POLICY, COMMITTEE ON FOREIGN RELATIONS,

Washington, DC.

The subcommittee met, pursuant to notice, at 2:47 p.m., in room SD–419, Dirksen Senate Office Building, Hon. John Barrasso (chairman of the subcommittee) presiding.

Present: Senators Barrasso, Gardner, Udall, Shaheen, and Markey.

OPENING STATEMENT OF HON. JOHN BARRASSO, U.S. SENATOR FROM WYOMING

Senator BARRASSO. Good afternoon. I would like to call order this hearing of the subcommittee of the Senate Foreign Relations Committee. Our hearing this afternoon is titled "American Energy Exports: Opportunities for U.S. Allies and U.S. National Security."

During my time in the Senate, I have focused on improving energy security of our Nation as well as our allies across the world. The United States recently became the world's largest oil and natural gas producer. As a result, the United States has a rare opportunity to simultaneously support our allies, reduce our trade deficit, and create much-needed jobs here at home. It can all be done through American energy exports.

U.S. exports of our natural gas, our oil, and our coal provide opportunities to advance our foreign policy objectives and strengthen our national security. Our Nation can help countries diversify their energy imports away from countries like Iran, Russia, and Venezuela. The administration and Congress need to focus on energy and take the steps required to eliminate barriers for exports of American natural gas, oil, and coal.

One good example of how the United States can assist our allies and partners through U.S. energy resources is the current situation in Europe. Many of our European allies import more than 80 percent of their natural gas from Russia, with some importing as much as 100 percent. While in the past Russia controlled the nations of Eastern Europe through military force, Russia now seeks to control them economically. Russia is able to use its energy resources to manipulate and threaten countries in Eastern Europe because of their dependency on Russia's natural gas. Countries are asking America to increase exports in order to help reduce the threat Russia proposes to Europe by offering an alternative source of natural gas. Every molecule of American natural gas that makes it into the world's market is going to be a molecule that cannot be used by Russia to hold countries in Europe hostage.

In July 2014, Ukrainian President Poroshenko wrote an article in the Washington Post asking for the United States to help Ukraine and respond to Russia. He said, "We need U.S. natural gas to shore up our energy supplies so that we cannot be blackmailed by Moscow. We need a reliable partner and ally to help fuel our nation."

Four of our allies in Europe—Hungary, Poland, Slovakia, and the Czech Republic—have asked the United States to increase exports to help blunt Moscow's influence. These countries know what Russia aggression looks like, and they are asking for our help. It is time for the United States to take the needed steps to help expedite U.S. natural resources.

The geopolitical benefits of U.S. energy exports are not limited to Europe. Whether we talk about the United States being an alternative to Iran's crude oil exports for countries like China, India, Japan, or South Korea, which would help cut off a vital supply of funding to the Iranian regime, or the United States supplying natural gas to help boost economic development for countries in the Western Hemisphere dealing with the uncertainty of Venezuela's energy exports and subsidies, or the United States strengthening engagement in trade with East Asian nations, U.S. energy exports can provide important national security benefits and strengthen America's foreign policy leadership across the globe.

Over the last several years, I have introduced legislative initiatives aimed at making it easier to export American natural gas to our allies overseas. Earlier this year, I introduced S. 33, the LNG Permitting Certainty and Transparency Act. This bipartisan bill expedites the permitting process for LNG exports by requiring the Secretary of Energy to make a final decision on an export application within 45 days after the Federal Energy Regulatory Commission completes the environmental review process. I am also cosponsor of S. 1312, introduced by Senator Murkowski, to repeal the ban on exports of domestic crude oil. Through these efforts and many others, I continue to work to remove barriers and increase exports of American natural gas, oil, and coal.

I will now turn to the ranking member, Senator Udall, so he can offer his opening remarks.

OPENING STATEMENT OF HON. TOM UDALL, U.S. SENATOR FROM NEW MEXICO

Senator UDALL. Thank you very much, Chairman Barrasso, and thank you for scheduling this hearing.

I would like to add a few thoughts about the importance of this hearing. This is a very timely topic, and one where I think members with varying views will benefit from our panel today.

Making a decision about increasing exports of liquified natural gas and crude is not as simple as it sounds. Ten years ago, Congress was holding hearings about the need for the United States to import natural gas. And our oil dependence seemed hopeless. Now we face an abundance of natural gas and growing domestic oil production, both nationwide and in my home State of New Mexico. Energy exports could lead to more jobs and revenue for States like New Mexico and Wyoming. For natural gas, we are now projected to have enough supplies to meet domestic needs for a century, and there is a great demand for LNG from our allies, such as Japan and Europe. If we are going to break the Russian stranglehold on energy in Eastern Europe, then we should seriously consider taking the steps to export LNG. I do not claim it is a quick and easy solution, but I do believe it is a valuable tool.

For these reasons, I am pleased to join our subcommittee chairman on this legislation to improve the DOE permit process for LNG exports, to avoid unnecessary delays for LNG export applications at facilities that have already received environmental approvals.

But, the resources we have—the resources we may export are also important for the United States and our ability to grow our economy and maintain our energy security. Keeping prices stable enables middle-class Americans to not only fill the tank and balance their budgets, but enables American manufacturing and ensures that our military can respond anywhere in the world to protect our national interests. With ongoing turmoil and war in the Middle East going back many decades, we must understand that there is a direct link between our energy policy and our national security. Before we make changes, especially with regards to crude oil, we should understand how proposed changes may impact our national security interests.

Today, the United States Armed Forces—in particular, the Navy—are always on patrol to prevent disruptions in our global energy supply chain. We must be cognizant that our servicemembers are in harm's way overseas as we make decision whether to permit the export of crude oil. Today, the United States can already export refined oil products, such as gasoline, diesel, and other oil products. However, because of increased crude production in the United States and a refining capacity that is not currently designed to support all the types of domestic crude entering the market, there is an economic question of whether this crude should be allowed to be exported. I believe there are strong arguments on each side regarding the question of crude exports, and I hope to learn more throughout the hearing.

Some of the questions I hope might be addressed include how this decision will impact U.S. national security. Who has the refining capacity for our crude exports? How will this decision impact States and communities who extract oil? Are our refineries beginning the process of investing in infrastructure to refine more of this crude oil here in the United States?

In addition, I think we also need to take a hard look at how our energy policies interact with our environmental policies and impact our ability to limit global climate change. Climate change is real, and it is already beginning to have national security implications across the globe. In fact, there has been—a fact that has been confirmed by the Pentagon and stressed in numerous policy studies, including the Quadrennial Defense Review. Climate impacts the countries and people who have the least resources, threatening the very fabric of society in many developing countries. So, we should also consider whether policies to encourage or allow U.S. LNG or crude exports are likely to improve or worsen global emissions. LNG is likely to displace coal or oil use for power generation when exported, but the question on crude is more uncertain.

With that, Chairman Barrasso, I am eager to hear from all our witnesses today. They are an expert and distinguished panel.

I would like to thank Commander Lippold for being able to join us on relatively short notice.

And I am looking forward to a good hearing.

Senator BARRASSO. Thank you very much, Senator Udall.

At this point, I would like to welcome all of our witnesses. I know you have very busy schedules. I appreciate all of you being with us today to share your thoughts on American energy exports.

Joining us this afternoon on this panel is Robert McNally, the president of The Rapidan Group; Mr. David Gordon, senior advisor of the Eurasia Group and adjunct senior fellow for the Center for a New American Security; Mr. Jamie Webster, the senior director of IHS Energy; and Commander Lippold, president of Lippold Strategies.

So, I want to thank you again for making time to share your thoughts and your insights. Your full statement will be entered into the record without objection, and I would ask you to summarize it, if you could, in 5 minutes in order for the members to have an opportunity to ask questions.

Mr. McNally, we would like to start with you.

STATEMENT OF ROBERT MCNALLY, PRESIDENT, THE RAPIDAN GROUP, LLC, BETHESDA, MD

Mr. MCNALLY. Chairman Barrasso, Ranking Member Udall, members of the committee, my name is Robert McNally, and I head The Rapidan Group, an independent energy consulting firm based in Bethesda, MD. It is an honor to share my personal views with you today about the role of U.S. energy exports and strengthening our foreign policy and national security.

As a former practitioner of energy security policy while on the White House National Security Council and with nearly two and a half decades analyzing energy markets and policy, may I express my appreciation to you and your colleagues in Congress, of both parties, for your work in recent years in energy exports. Exports like the gas boom itself appeared to come quickly and out of nowhere. Congress has showed leadership and alacrity in ensuring the boom serves our foreign policy objectives.

We have some good history here. We were as much an arsenal of energy as an arsenal of democracy during World War II, supplying 6 out of the 7 billion barrels used by the allies to prevail in that conflict. And, even after our net crude oil imports started rising after the 1950s, we made extra supplies available to allies when Middle East conflicts in 1956 and 1967 triggered disruptions.

Everything changed for the worst in the 1970s, when we lost control of the global oil market and reeled from soaring imports and prices. For the next 40 years, our energy and national security policy stemmed largely from fears of major supply interruptions to ourselves and our allies. But, thanks to American ingenuity, sweat, and risk-taking, those days are over. Twelve years ago, we all thought LNG imports would be soaring like crude oil, but, after the shale gas revolution raised proved reserves by 77 percent, we are now on track to become a net gas exporter by 2017.

Meanwhile, crude oil production in the United States rose from 5 million barrels a day in 2006 to 9.4 million barrels a day in the first quarter of this year. Our import dependence is down from 60 to 24 percent. We are the world's largest liquids producer.

The economic benefits of our—for our consumers, businesses, and public sector are well analyzed and extolled by a broad spectrum of officials, experts, think tanks, and leading journals. Your subject today, Mr. Chairman, and the focus of my remarks, concerns national security.

The shale gas boom directly help our European allies by giving them bargaining leverage with their main supplier, Russia. We first helped by backing out imports of LNG that we no longer needed, making them available for Europe. Then, with congressional encouragement, the Department of Energy streamlined and accelerated the process of approving LNG facilities for non-FTA countries like our strong ally, Japan. As a result, without having yet exported one molecule of LNG, our allies in Europe and Japan have already enjoyed much greater bargaining power when they face Russia. Just having the option to buy U.S. gas strengthens the bargaining power of our allies when they negotiate. For example, last December, Lithuania brought on a new terminal, LNG import terminal, the Independence. Gazprom has to lower its prices by 20 percent.

Turning to oil, current policy allows the unrestricted export of refined products like gasoline, diesel, and liquid petroleum gas, but restricts crude oil exports to Canada and a few other limited circumstances. Amidst the panic 40 years ago, policymakers had imposed price controls and complemented them with a ban on crude oil and refined products. We did not want our controlled crude and products running away abroad to escape the price controls. But, the price controls were lifted in 1981. Someone forgot to lift the crude oil ban. No one paid attention, because, until recently, we had no reason to export crude.

Today, the crude oil ban is not just an anachronism, it is a threat to the boom, itself, due to a mismatch between the quality of crudes we produce and refine. It discriminates against U.S. oil producers, thereby threatening continued investment and production.

In recent months, the industry has laid down rigs, let go workers, and cut investment spending in response to the collapse in global crude oil prices. The global oil market is not for the timid, and producers must roll with the punches. But, the last thing our producers need or deserve is regulatory discrimination that, if it had any valid purpose 40 years ago, no longer does today. Many studies and experts concluded consumers would benefit from lifting the crude oil ban. With regard to foreign policy, I would name a few of the benefits we would expect to derive:

One, preserve and protect supply diversity. The oil market is global. A supply disruption anywhere transmits a price shock everywhere, including here. Unfortunately, two-thirds of the global proven reserves lie in the Middle East. Forty percent of oil flows through the Strait of Hormuz—traded oil—flows through the Strait of Hormuz. The more we can get from outside, the better.

Second, reduce oil price volatility and, thereby, protect economic stability at home and abroad.

Third, practice what we preach on free trade. We are the only advanced country that bans crude oil exports. The ban contradicts our attempt to promote free trade and open markets, especially in energy and strategic commodities that are produced and sourced globally.

Fourth, finally, help achieve national security priorities, especially regarding Iran's nuclear ambitions. Without our oil boom, disruptions in recent years would have caused oil prices to skyrocket, making sanctions against Iran's crude oil exports difficult, if not impossible. Looking ahead, if a deal is struck, Tehran would resume export of oils while our producers remained shackled. As Senator Murkowski said in April, "We should not lift sanctions on Iranian oil while keeping sanctions on American oil. It makes no sense." If nuclear talks fail or Iran cheats, we may ask for continued or further import cuts from our allies in Europe and Asia, whose refineries are well suited to our oil. It would be neither fair nor responsible to do so without offering them access to our supply.

In conclusion, Mr. Chairman, Congress and the administration have worked successfully so far to leverage our natural gas boom to aid our allies and promote U.S. foreign policy. I urge you to continue to complete the job with regard to crude oil so that the blessings of our energy boom can extend from our consumers and economy to our allies and foreign policy interests around the globe.

Thank you, sir.

[The prepared statement of Mr. McNally follows:]

PREPARED STATEMENT OF ROBERT MCNALLY

Chairman Barrasso, Ranking Member Udall, and members of the committee, my name is Robert McNally and I am the president and founder of The Rapidan Group, an independent energy market, policy, and geopolitical consulting firm based in Bethesda, MD. It is an honor to speak with you today about the role of U.S. energy exports in strengthening our foreign policy and national security, particularly by assisting our allies, many of whom contend with much more challenging energy security situations than ours.

Oil and natural gas are the lifeblood of modern civilization. Their abundance and affordability are prerequisites for thriving economic growth, high living standards, and ample employment. They are also an essential requirement for our national security. U.S. foreign policy has historically benefited from our strong position as a producer and exporter of energy. While we were known as the "Arsenal of Democracy" during World War II, we were equally an "Arsenal of Energy," supplying nearly six out of seven barrels consumed by the allies.[1] Even after net crude imports began rising steadily after the war, our control of spare production capacity enabled us to supply our allies and prevent economically damaging price spikes that would have resulted due to oil supply disruptions associated with Middle East conflicts in 1956 and 1967.

But after the energy, geopolitical, and economic convulsions of the 1970s, our confidence in our domestic abundance and control shifted to apprehension about dependence and vulnerability. For the past 40 years our foreign and national security policy planning has prioritized preparing against supply interruptions and price spikes, protecting Middle East oil fields from hostile control, and protecting the supply lines between the region and global markets.

In this respect, the tremendous and unexpected boom in domestic oil and gas production in recent years is an enormous blessing for our country. In the last 10 years, our net oil imports fell from 12.5 mb/d to 5 mb/d (in the first quarter of 2015) or from 60 percent to 24 percent of supply.[2] For the first time since the 1950s, most official projections see U.S. net energy imports, which includes all fuels, declining and eventually ending.[3] Our newfound abundance does not mean we can ignore the Middle East, which holds nearly half of the world's proven oil reserves and supplies one-third of global production. That region will remain a source of potential price and supply shocks, and its stability will therefore remain a vital national interest. But our domestic boom does confer enormous benefits and requires that we change our thinking about energy.

The economic benefits of our energy boom to our consumers, businesses, and public sector have been extensively analyzed and extolled by a broad spectrum of officials, experts, think tanks and leading journals. They include higher domestic supply, lower gasoline prices, and stronger GDP growth and are summarized in the appendix below from Columbia University's Center on Global Energy Policy, where I am a nonresident fellow.

Your subject today, and the focus of my remarks, concerns the national security benefits of U.S. energy exports. To summarize at the outset, those include:

1. Strengthening our influence and leadership position with allies and our leverage vis-a-vis adversaries by reducing our dependence on energy imports and enhancing our national economic and geopolitical vitality.
2. Adding a new, stable, and relatively flexible source to the global supply pool, which reduces price volatility and thereby supports our own economic growth and that of our allies.
3. Offering allies and friends alternative supplies and the economic leverage it affords them in their negotiations with energy exporters like Russia.
4. Supporting our top foreign policy goals such as enabling oil export sanctions against Iran to be implemented without triggering economically harmful price increases.
5. Bolstering U.S. leadership in the cause of free and open markets.

NATURAL GAS

While much attention is paid to the spectacular turnaround in our oil supply and imports, it is worth remembering our need for imported liquefied natural gas (LNG) underwent a similar and surprising transition. Between 2002 and 2007 our LNG imports had more than tripled, and officials were expecting another doubling. We were building terminals to import from suppliers like Qatar and Russia. But after the shale gas revolution increased proven reserves by 77 percent from 200 billion cubic feet (bcf) in 2004 to 354 bcf last year, we are now on track to become a net natural gas exporter by 2017, according to EIA.

The U.S. shale gas boom directly helped our European allies by giving them bargaining leverage with their main supplier, Russia. We helped first by backing out LNG imports, making them available for our allies, particularly in Europe. Then, as we began approving and reconfiguring facilities to export LNG, Moscow was forced to accept lower and more flexible prices on its sales to European customers.

The foreign policy benefits of LNG exports quickly became apparent to our leaders. In early 2013, then National Security Advisor Tom Donilon said the U.S. has "a strong interest in a world natural gas market that is well supplied, diverse, and efficiently priced. Increased U.S. and global natural gas production can enhance diversity of supply, help delink gas prices from expensive oil indexed contracts, weaken control by traditional dominant natural gas suppliers, and encourage fuel switching from oil and coal to natural gas."[4]

Foreign policy was a factor in DOE's consideration of LNG export facilities for non-FTA countries. Last April, shortly after Russia's aggression against Ukraine, then DOE Principal Deputy Assistant Secretary for Fossil Energy Chris Smith testified to the House Foreign Affairs Committee that his agency considers international factors as part of the public interest determination, among many other domestic factors, noting "of course, we are monitoring the situation in Europe very closely, and we certainly take energy security of our allies very seriously. We have taken recent global events into account in making decisions in recent applications."[5]

It is important to realize that we need not export large quantities of gas to benefit from a foreign policy standpoint. Just having the option to buy from the U.S. strengthens the bargaining power of our allies when they negotiate long-term contract prices with suppliers like Russia. Last December, Lithuania opened a costly LNG import terminal, an example of an ally willing to pay a security premium for diversified source of supply. Lithuania's new terminal forced Gazprom to drop its prices to Lithuania, reportedly by 20 percent.[6]

Our willingness to export LNG also reduces future uncertainty and enhances contingency planning. It is impossible to predict every future economic and security challenge our allies or we will face, but knowing that trade links remain open constitutes a substantial source of support to planners and decisionmakers when unforeseen challenges and crises occur.

The U.S. policy of exporting natural gas also helps allies contending with challenges that are foreseeable. For example, longer term, experts believe Europe's ability to significantly wean itself from very high dependence on Russian pipeline gas, particularly highly dependent Baltic and southeast European states, will rely largely on LNG providers (including the U.S.) and to a lesser extent new pipeline gas from Azerbaijan.[7] For those countries renegotiating long-term contracts with Russia and constructing LNG import facilities, continued willingness by the U.S. to export LNG is paramount. Russia will always be a major gas supplier to Europe, but Moscow's ability to dictate prices will erode as the market becomes more diverse and liquid, partly due to our ability and willingness to export LNG.

For these reasons, our allies asked for access to our natural gas. Former Obama administration National Security Advisor, Tom Donilon, noted in 2013 "[m]any of our allies have expressed interest in the potential of the United States as a global natural gas supplier" and the leaders of Japan and India have requested access to U.S. LNG supplies during their visits to Washington.[8] In the case of Japan, our willingness to build and construct LNG export facilities provided substantial moral support and leverage during a time when the country was reeling from the consequences of the March 2011 Fukushima disaster, which led to a shutdown of the nation's nuclear plants and triggered large increases in LNG imports. EIA reported Japan is currently able to supply only 9 percent of its total energy needs from domestic sources, down from 20 percent before the Fukushima disaster. Japan is the world's largest LNG importer, second-largest coal importer, and third-largest net importer of crude and products. With more than 30 percent of the world's LNG passing through the Strait of Hormuz, Japan is naturally anxious to diversify its imports of LNG, and over the medium to long term will add supplies from the U.S. So far, the U.S. Department of Energy has granted final approval to 7 LNG export projects for non-FTA countries such as Japan.[9]

CRUDE OIL

Since 1975, U.S. law has prohibited the export of domestic crude oil, except to Canada and in other limited circumstances. The crude oil export ban was enacted just after we lost control of the oil market and were reeling from soaring oil prices and mounting import dependence. Policymakers had imposed domestic price controls and complemented them with an export ban on crude and refined products to prevent the loss of domestic supply to uncontrolled markets abroad. While price controls and the export ban on refined products were lifted in 1981, the crude oil ban oddly remained in place. But until the recent shale oil boom, the need to export oil never arose, so few paid much attention to the ban.

As with natural gas, our oil circumstance has changed for the better. Once again the U.S. oil industry delivered a pleasant surprise by applying multistage hydraulic fracturing and horizontal drilling to unlock enormous new amounts of domestic energy. Thanks to American ingenuity, sweat, and risk-taking, U.S. crude oil production rose from 5 million barrels per day (mb/d) in late 2006 to 9.4 mb/d in the first quarter of 2015. Total petroleum and other liquids production are now 14.8 mb/d, making the U.S. the largest liquids supplier in the world.

The United States is and will remain a substantial crude importer. We import mainly heavy or dense crudes because our refineries were designed to process them. Half of our crude imports come from our friendly neighbors Canada and Mexico.[10] But the shale oil boom has unlocked crudes of a lighter variety that are more suitable to refineries abroad. So it makes economic sense for the United States to export some of its light crude while continuing to import heavy crude. The fact that we import crude oil does not mean we should keep the ban in place. If we banned the export of commodities or goods that we also import, we would not allow the export of cars, food, steel, medical equipment, and many others.

As noted above, and illustrated in the appendix below, many studies and experts have analyzed and discussed the economic benefits of lifting the ban. Our consumers would benefit from slightly lower pump prices, stronger economic growth, and higher employment. With regard to foreign policy, lifting the ban would confer the following benefits:

1. Increase and diversify oil supply, thereby reassuring our allies about supply security. The oil market is global; a supply disruption anywhere transmits a price increase everywhere, including here. Unfortunately, as noted above, the lion's share

of global proven oil reserves is located in the unstable Middle East. Some 40 percent of traded oil flows through the Strait of Hormuz. Therefore, every barrel we can source from elsewhere adds more than just 42 gallons of new liquid to the global pool, it also enhances security by diversifying supply.

If the crude oil ban were lifted, the amount and destination of exports would depend on market factors. Like with natural gas, we need not physically export a lot of oil to derive benefits from being open to exports. In foreign policy, symbolism and signaling matter.[11] "Many U.S. allies and trading partners are interested in purchasing American oil to diversify away from Russia, Iran, and other problematic sources," Senator Murkowski noted on June 9, adding: "Allowing such shipments would send a powerful signal of support and reliability at a time of heightened geopolitical tensions in much of the world. The mere option to purchase U.S. oil would enhance the energy security of countries such as Poland, Belgium, the Netherlands, India, Japan, and South Korea, even if physical shipments did not occur."[12] The EU depends on Russia for 28 percent of its crude and the Middle East for another 14 percent. Iran, which had lost the 500–600 kb/d it used to supply to Europe due to sanctions, will likely try to recapture that market share after sanctions are lifted. Japan relies on the Middle East for over 80 percent of its crude imports.[13] Japan has cut the share of oil it imports from Iran in half from 2012 to 2014, from about 10 percent to 5 percent.[14]

2. Reduce oil price volatility and thereby protect economic stability at home and abroad. U.S. shale oil supply is more responsive to price swings than most other oil production, such as ultra-deep water or oil sands. Due to relatively high decline rates and capital intensity, shale oil production responds to price changes in months to quarters whereas other supply takes several years or more. The increased flexibility lowers the volatility of oil prices and thereby promotes economic stability. The U.S. will not replace OPEC spare capacity, which consists of supply available within 30 days.[15] But shale oil does increase the flexibility of the supply system.

3. Strengthen U.S. influence and leverage internationally, especially in the case of Iran. Ambassador Carlos Pascual, who until recently was the Obama administration's lead international energy policy negotiator, testified to your committee that from his experience he had "seen that lifting the export ban would increase U.S. leverage in convincing international partners to adopt policies that mirror U.S. interests on Iran, Russia, free trade, and even the environment."[16]

Iran constitutes a good recent example of how the U.S. oil boom has contributed to our energy security while also spotlighting the need to remove the export ban. The unexpected increase in U.S. oil production by some 3.7 mb/d between 2008 and 2014 was fortuitously timed. It coincided with the loss of roughly 3 mb/d of disrupted global supply, particularly from Libya due to civil war in 2011. The U.S. oil boom reduced our imports, freeing up barrels that could flow elsewhere, keeping a lid on oil prices everywhere. Without the U.S. supply surge, much higher oil prices would have resulted, dampening support for sanctioning Iran's oil exports.

However, as the Iran nuclear issue proceeds it would be in our interest to remove the crude oil ban. If a nuclear deal with Iran is struck, the U.S. and EU will lift restrictions on Iran's ability to export oil. Meanwhile, the crude oil ban U.S. producers face will remain in place. While not intentional, an absurd juxtaposition would result. As Senator Murkowski said in April, "We should not lift sanctions on Iranian oil while keeping sanctions on American oil. It makes no sense."[17]

If nuclear talks fail or Iran cheats, sanctions on Iran's oil exports may remain in place or be strengthened. We may ask the EU to retain its total embargo on Iranian imports, while asking the six remaining importers—including allies South Korea and Japan—to further reduce their purchases. These countries have refineries that are better suited to shale oil and would likely bid on U.S. crudes depending on market conditions. How could we ask our allies to further cut oil imports from Iran without making our own supplies available to them?

4. Replace resource nationalism with free trade. We are the only advanced country that bans crude oil exports. Canada, the U.K., and Australia allow both crude imports and exports. The crude oil ban contradicts our attempt to promote free trade and open markets, especially in energy and other strategic commodities that are produced and sourced globally. To cite Ambassador Pascual again: "[M]aintaining the ban increasingly undercuts U.S. credibility in its three-decades endeavor to persuade other nations to permit free flows of energy trade and not constrain trade in strategic commodities with political restrictions and resource nationalism. The United States, for instance, has launched numerous complaints under the WTO against China exactly because of these kinds of restrictions on natural resources that China imposes."[18]

CONCLUSIONS

The U.S. energy boom is a national security and foreign policy blessing. Our ability and will to export energy strengthens our global influence; reassures allies while giving them leverage with major producers like Russia; bolsters free trade, especially for strategic commodities; and reinforces efforts to dissuade Tehran from developing a nuclear weapons capability. As our energy circumstances have changed, so too should our energy policy. We benefit from free trade in natural gas and would do so from crude oil as well. Seizing the foreign policy benefits of energy exports is one of the few major issues today that enjoys bipartisan support, as exemplified by former Bush National Security Advisor Stephen Hadley and former Obama administration Defense Secretary Leon Panetta, who wrote: "Too often foreign-policy debates in America focus on issues such as how much military power should be deployed to the Middle East, whether the U.S. should provide arms to the Ukrainians, or what tougher economic sanctions should be imposed on Iran. Ignored is a powerful, nonlethal tool: America's abundance of oil and natural gas. The U.S. remains the great arsenal of democracy. It should also be the great arsenal of energy." [19]

End Notes

[1] "A History of the Petroleum Administration for War," 1946, p. 1.

[2] June 2015 Short Term Energy Outlook, Table 4a. For historical data, see EIA. In 2005, total product supplied was 20.8 mb/d and net imports were 12.5 mb/d.

[3] http://www.eia.gov/pressroom/presentations/gruenspecht__06092015.pdf, slide 2.

[4] April 24, 2013. https://www.whitehouse.gov/the-press-office/2013/04/24/remarks-tom-donilon-national-security-advisor-president-launch-columbia.

[5] http://www.gpo.gov/fdsys/pkg/CHRG-113hhrg88088/html/CHRG-113hhrg88088.htm.

[6] http://mobile.reuters.com/article/idUSL5N0XA2YY20150413.

[7] See graphic in the Appendix illustrating EU energy dependence on Russia. Reducing European Dependence on Russian Gas: Distinguishing natural gas security from geopolitics, Oxford Institute of Energy Studies, October, 2014.

[8] Tom Donilon's speech at the Columbia Center on Global Energy Policy, April 24, 2013.

[9] Current status of project approvals by DOE is available at http://energy.gov/sites/prod/files/2015/05/f22/Summary%20of%20LNG%20Export%20Applications.pdf. EIA noted: "Japan's Chubu Electric and Osaka Gas signed preliminary agreements to import more than 100 Bcf/y each for 20 years from Freeport LNG starting 2017, marking a potential reduction in the high LNG prices (cont.) that Japan currently pays. The companies also plan to acquire half of the assets of Freeport LNG's first train. Sumitomo, Japan's third-largest trading house, holds an agreement to buy 110 Bcf/y for 20 years from Cove Point LNG located on the U.S. East Coast and which received approval to export to non-FTA countries in September 2013. Sumitomo intends to sell the cargoes to Japanese utilities Tokyo Gas and Kansai Electric. In May 2013, Mitsubishi and Mitsui, Japan's two largest trading companies, first ventured into the U.S. shale gas export market by purchasing a combined 33 percent equity share in the Cameron LNG project located in the Gulf of Mexico. The companies have agreements to purchase 384 Bcf/y, or two-thirds of the terminal's export capacity that is expected to come online by 2017. Altogether, Japanese companies have secured about 1,000 Bcf/y in long-term volumes from the new U.S. terminals coming online by 2020."

[10] EIA data show the U.S. imported 7.3 mb/d of crude in 2014. Of the total, Canada supplied 2.9 mb/d and Mexico 0.8 mb/d.

[11] http://ec.europa.eu/energy/sites/ener/files/documents/crude-oil-imports2014.zip.

[12] http://www.energy.senate.gov/public/index.cfm/files/serve?File__id=86561761-6237-45a3-b41b-fe0bb976c32.2

[13] http://www.paj.gr.jp/english/statis/data/04/paj-4E__201506.xls.

[14] Ibid and http://www.bbc.com/news/world-asia-16523422.

[15] IEA recently redefined spare capacity to include supply available within 90 days. EIA retains a 30 day definition. By historical standards, OPEC spare capacity—held almost entirely by Saudi Arabia—are low. While shale oil can reduce oil price volatility, it cannot eliminate it.

[16] http://www.energy.senate.gov/public/index.cfm/files/serve?File__id=4c054551-8357-46fd-95e3-1eee2686aee1.

[17] http://www.energy.senate.gov/public/index.cfm/2015/4/sen-murkowski-calls-for-lifting-prohibition-on-crude-oil-exports.

[18] See footnote 8.

[19] http://www.wsj.com/articles/the-oil-export-ban-harms-national-security-1432076440.

APPENDIX SUBMITTED WITH PREPARED STATEMENT

The source for the following three figures is Columbia University Center for Global Energy Policy's January 2015 study entitled "Navigating the U.S. Oil Export Debate," by Jason Bordoff and Trevor Houser. http://energypolicy.columbia.edu/on-the-record/navigating-us-oil-export-debate

Figure 15: Increase in US crude production from lifting export restrictions, 2015–2025
Million b/d

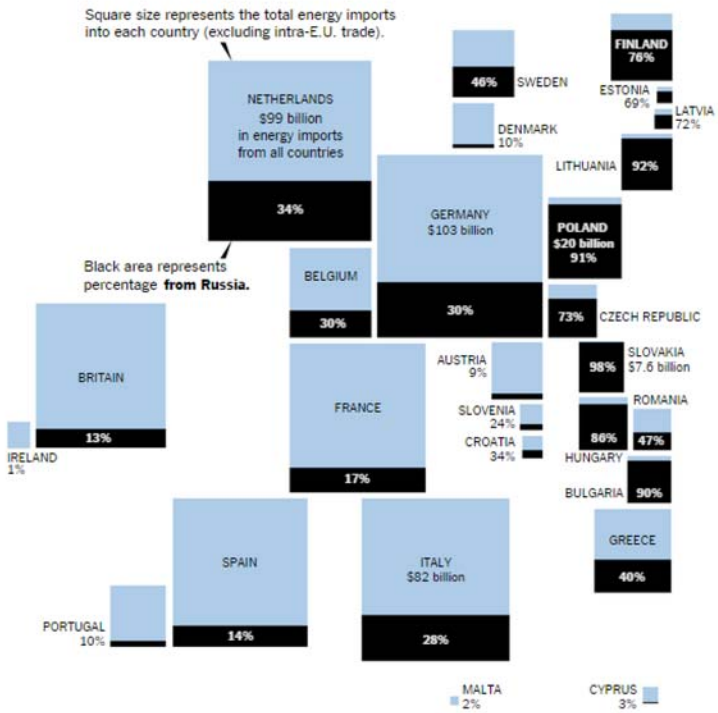
Source: ICF, IHS, NERA, Aspen Institute, Goldman Sachs, and Rhodium Group estimates.
*2020 only.

Figure 15: Increase in US crude production from lifting export restrictions, 2015–2025
Million b/d

Source: ICF, IHS, NERA, Aspen Institute, Goldman Sachs, and Rhodium Group estimates.
*2020 only.

How Much Europe Depends on Russian Energy

Current European Union sanctions ban the sale of certain oil industry technologies to Russia. But the situation is complicated by the union's reliance on imported Russian oil, which has not yet been restricted. UPDATED September 2, 2014 | RELATED ARTICLE

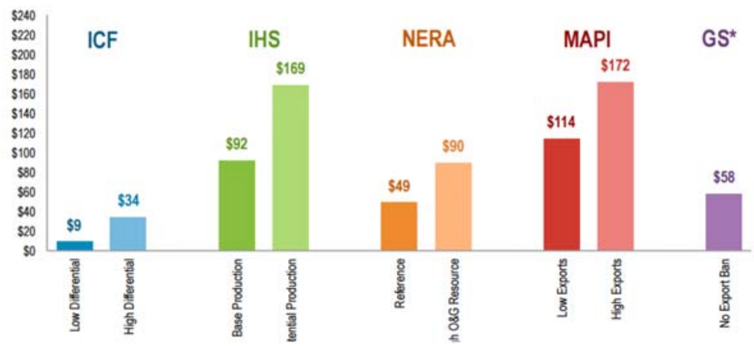


Note: Luxembourg's imports are too small to show.

Source: Eurostat as published by Global Trade Information Services

Printed in The New York Times, September 2, 2014

Figure 17: Increase in GDP from lifting crude export restrictions, 2015–2025
Billion 2013 USD



Source: ICF, IHS, NERA, Aspen Institute, Goldman Sachs and Rhodium Group estimates.
*2020 only.

Senator BARRASSO. Thank you very much, Mr. McNally.
Mr. Gordon.

STATEMENT OF DAVID GORDON, PH.D., SENIOR ADVISOR, EURASIA GROUP, ADJUNCT SENIOR FELLOW, CENTER FOR A NEW AMERICAN SECURITY, WASHINGTON, DC

Dr. GORDON. Thank you very much, Mr. Chairman. I want to thank you and Senator Udall and members of the committee for the opportunity to testify before you today on how increased energy exports can advance U.S. foreign policy goals, assist our most important allies, and strengthen U.S. national security. I commend your initiative in holding this hearing on a very important opportunity that the United States has to enhance a new tool in our foreign policy arsenal.

In a domestic market awash with oil and gas, keeping export restrictions in place discriminates against U.S. producers and threatens investment in new supply, thereby jeopardizing economic security and trade gains from the energy boom. Policymakers should streamline and speed up the process of licensing natural gas export projects and begin to lift the oil export ban to bring export policy in line with present market circumstances.

The restrictions on U.S. energy exports were the outcome of bipartisan efforts and have been sustained over many decades by both Democratic and Republican administrations. It is not surprising, therefore, that calls for modernizing our export policies have also been bipartisan.

President Obama's Chief of Energy Diplomacy in the State Department, Carlos Pascual, who has recently left government, is now a leading proponent of lifting the restrictions on U.S. energy exports. Last month, writing in the Wall Street Journal, Obama's former CIA Director and Secretary of Defense, Leon Panetta, and

President Bush's National Security Advisor, Steve Hadley, highlighted that, while the United States has broken free of its dependence on energy from unstable sources, our friends and allies, "do not enjoy the same degree of independence. The moment has come," they write, "for the U.S. to deploy its oil and gas in support of its security interests around the world."

I want to spend the time allotted to me to explain how enhanced energy exports would support United States foreign policy goals in regards to Russia, East Asia, and Iran.

A fundamental pillar in the current United States policy toward Russia is to degrade their ability to compete in the global energy markets. Liberalizing United States exports will constitute an important strategic act of support for our allies in Europe who are more threatened by Russian regional destabilization and have paid a much bigger economic cost by imposing sanctions on Russia than has the United States. Such a move would materially enhance the prospects for sustaining the transatlantic stance in support of continuing sanctions against Russia.

Is this going to change Russia's behavior quickly? No. Can it have an important impact over the long time? Absolutely.

For East Asian consumer countries, more United States supply in the market would give them new opportunities to diversify away from increasingly unstable gulf and Russian oil and gas supplies. This will be true for all East Asian nations, including both our treaty allies in Northeast Asia and China.

Energy security is one of the major drivers of China's regional assertiveness. Policies that confer mutual benefit on the United States and the group of East Asian nations facing off as regional competitors should be priorities for the United States. This may help to weaken strategic intraregional competition by increasing the shared incentives for stable, efficient market activity. Enhancing stability in this neighborhood is directly in line with U.S. policy of rebalancing to Asia, will benefit our country, our allies, and all others who see their own stability tied to the future of this burgeoning region. Making China view the United States as an increasingly attractive economic partner is an important complement to our policy of sustaining our military strength in the Western Pacific.

Finally, looking at Iran. One of the most important security benefits of the unconventional energy revolution what was its enabling of crippling oil sanctions against Iran without which Iran would not have come to the negotiating table over their nuclear program. While the outlines of a potential final agreement between Iran and the P5+1 are emerging, it is too early to assume success. U.S. policymakers need to enhance their ability to impose tough additional energy sanctions in the future. To prepare for the potential future imposition of sanctions, stimulating alternative oil supplies are going to be absolutely critical. If adversaries do not believe that the United States and its allies have the economic and political tolerance to cope with a self-imposed oil price increase which could occur if more sanctions pull more oil off the market, those adversaries may call our bluff. Furthermore, allies of the United States, many of whom have reluctantly gone along with energy sanctions in the past, may prove unwilling to participate in further energy sanctions unless the United States makes a serious effort to stimulate alternative oil supplies. Should the oil—should the P5+1 talks conclude successfully and oil sanctions on Iran are lifted, it is very much in the United States interest to minimize the benefit that this accrues to Iran. American producers want to compete with Iran. They should be allowed to do so.

In conclusion, in a time when many questions about the role of the United States as a global energy player and a world leader are being heard, Washington has a unique opportunity to strengthen domestic economic growth, energy market stability, U.S. global leadership, and open trade relations. Removing the outdated and detrimental limits on the export of U.S. natural gas and crude oil will advance these goals. It will deepen our trading ties with strategic allies. It will improve the economic position and energy market stability of our Nation and partners abroad. Our closest allies in Europe and Asia have asked for greater access to U.S. oil and gas. Policymakers should embrace these benefits for our allies and ourselves, and liberalize our energy export rules.

Thank you very, very much.

[The prepared statement of Mr. Gordon follows:]

PREPARED STATEMENT OF DAVID F. GORDON

Chairman Barrasso, Senator Udall, and members of the committee. Thank you very much for the opportunity to testify before you today on how increased energy exports can advance U.S. foreign policy goals, assist our most important allies, and strengthen U.S. national security. I commend your initiative in holding this hearing on a very important opportunity that the United States has to enhance a new tool in our foreign policy arsenal.

The unconventional energy revolution in the United States is bringing about a new era of energy abundance and is reshaping our gas and oil industries, stimulating industrial output, and has the potential to dramatically enhance many of our global trading relationships. The energy revolution has powered our recent economic recovery, dramatically lowered our dependence on imported oil and gas, and reinforced the continued global primacy of the U.S. dollar. Additionally, it has helped to stabilize the global energy market during a period of record, sustained supply disruptions in the Middle East and elsewhere. By strengthening our global trading position and our economy—the engine of our national security—the energy revolution already has meaningfully advanced our security and the ability of the United States to lead on foreign affairs.

Going forward, our remarkably productive, innovative, and resilient energy sector can deliver even further benefits to U.S. foreign policy and national security. However, these benefits will be limited if policymakers do not change antiquated export policies that limit U.S. energy resources from moving to markets overseas.

In a domestic market awash with oil and gas, keeping export restrictions in place discriminates against U.S. producers and threatens investment in new supply, thereby jeopardizing economic, security, and trade gains from the energy boom. Policymakers should streamline and speed up the process of licensing natural gas export projects and begin to lift the oil export ban to bring export policy in line with present market circumstances. This will promote free trade and responsible growth in the sector, and enable the United States to reap the geopolitical advantages of having a larger and more flexible role in the global oil market that will directly support U.S. allies.

The restrictions on U.S. energy exports was the outcome of a bipartisan effort, and has been sustained and supported by both Democratic and Republican administrations. However, it today's abundant energy market supply conditions, these rules no longer make sense. And it is not surprising that calls for modernizing our export policies also have been bipartisan. Under President Obama, the State Department upgraded its energy diplomacy mission and tapped Carlos Pascual, former U.S. Ambassador to Ukraine and Mexico, to lead these efforts. Now out of government, Pascual is a leading proponent of lifting the restrictions on U.S. energy exports. Last month, writing in the Wall Street Journal, Obama's former CIA Director and Secretary of Defense Leon Panetta and President Bush's National Security Advisor

Steve Hadley highlighted that while the United States has broken free of its dependence on energy from unstable sources, our friends and allies "do not enjoy the same degree of independence. The moment has come," they write "for the U.S. to deploy its oil and gas in support of its security interests around the world."

NATIONAL SECURITY BENEFITS FROM ENERGY EXPORTS

Strengthening our Economy

Expanding our energy exports will further strengthen the U.S. trade account, reduce our international indebtedness, and thus enhance the stature and ability of the United States to lead on international economic, strategic and defense matters. In an era of budget austerity, war fatigue, proliferating security challenges, and the expanding use of economic sanctions, a strong U.S. economy expands policy options beyond the more conventional diplomatic and military choices. It creates an opportunity to hone smarter and more creative tools to advance our national interests in the international arena. Additionally, a more favorable trade balance liberates the United States to consider international trade policies and international lending that could be constrained, including by some of our key economic partners, such as China, in a scenario of greater U.S. indebtedness.

Increasing U.S. Attractiveness as a Trading Partner

In addition to providing an economic boost at home, lifting the oil ban will accrue economic yields to our foreign trading partners. A U.S. energy export policy that allows the free flow of all energy commodities—including crude oil and not just condensate and refined products—will enable the United States and our trading partners to optimize trade in various kinds of energy commodities, depending on seasonal and regional demands. The greater diversity in energy commodity trading relationships will support greater energy market efficiencies, lower costs for consumers, limit risks from supply disruptions, and promote greater economic growth. These factors can make the United States a more important trading partner for more energy consumers abroad, a circumstance which will expand the soft power leverage of the United States in international strategic relationships.

Promoting Open Markets

Lifting the restrictions on export of domestic crude will allow the United States to more credibly promote antiprotectionist policies on trade in the international arena. At a dynamic time in global energy trade and a critical moment in the evolution of U.S. trade relations with partners across the Atlantic and the Pacific, U.S. policy leaders have a unique opportunity to send a strong message on a commitment to open markets by lifting restrictions on oil export. Making a firm commitment to open energy trade will help the United States to influence trading policy priorities in other countries, such as those in East Asia. In that region, key decisions will be made over the coming years about the nature of international energy commodity market participation that will have a direct bearing on the U.S. economy. Having more open energy trade will be indispensable in winning potential future natural resources trading disputes that may arise.

Enhancing Market Stability

Encouraging the expanded production of U.S. oil and gas will mean a result greater flow of energy from a reliable, secure producer to the global market. When more of the supply pool comes from producers that are not at risk from political instability or imminent danger to critical energy infrastructure or supply lanes, the overall market is more stable. Additionally, U.S. exports do not need to travel through maritime hotspots such as the Strait of Hormuz to reach most foreign consumers. Major consumers in East Asia, for example, are highly vulnerable to supply disruptions coming from destabilizing conflict in the Middle East, from which a majority of their oil imports derive. Providing U.S. producers with the unrestricted ability to export will make them more responsive to market signals, and better able to quickly adapt to the needs of consumers, contributing to more stable market conditions and making it harder for some producing countries to use oil and gas as a strategic weapon.

U.S. ENERGY EXPORTS AND REGIONAL GEO-POLITICS

For our European allies, the presence of more U.S. energy in the market will offer more supply options, over time helping European countries to lower their dependence on Russia, which has a history of coercive energy supply policies. When Russia has more competition for supplying European demand it will have to work harder to play a role in the market. A fundamental pillar in the current U.S. policy is to degrade Russia's ability to compete in the global energy markets. Liberalizing U.S.

export policy will have the effect of reinforcing the pressure on Russia's energy sector and is thus in line with key U.S. national security goals. It will also constitute an important strategic act of support for allies in Europe, who are more threatened by Russian regional destabilization and have paid a bigger economic cost by imposing sanctions on Russia than has the United States. Such a move would materially enhance the prospects for sustaining the trans-Atlantic stance in support of continuing sanctions. When our closest allies are stronger, the United States is more secure and better able to bolster and lead multilateral security initiatives.

For East Asian consumer countries, more U.S. supply in the market would give them new opportunities to diversify away from increasingly unstable Gulf and Russian oil and gas supplies. In addition to boosting supply security, such diversification will yield greater market efficiencies and will contribute to lower prices. This will be true for all Asian nations, including both our treaty allies in Northeast Asia and China. Energy insecurity is one of the major drivers of China's regional assertiveness. Policies that confer mutual benefit on the United States and the group of East Asian nations facing off as regional competitors should be priorities for the United States. They may help to deter strategic intraregional competition by increasing the shared incentives for stable, efficient market activity. Enhancing stability in this neighborhood is directly in line with the United States policy of rebalance to Asia, and will benefit our country and all others that see their own stability tied to stability of this burgeoning region. Putting in place policies that can contribute, even if modestly, to enhancing regional stability will cultivate the influence of the United States in Asia and beyond.

One of the most important security benefits of the unconventional energy revolution was its enabling of crippling oil sanctions against Iran. Iran's oil exports decreased by almost 60 percent from approximately 2.5 million barrels per day in 2012 to 1.1 million barrels per day. There is little doubt that absent this pressure, Iran would not have come to the negotiating table over its nuclear program. Particularly in light of historically high oil supply disruptions globally, the international community would not have been able to sustain these sanctions, and cope with the oil price increases they would have caused, were it not for massive increases in alternative oil supplies. The United States added about 1 million barrels per day annually over the last several years, and Saudi Arabia also turned up production to balance the market.

Lifting the crude oil export ban will provide critical additional flexibility and leverage to the United States to sustain and expand energy sanctions—should they be needed—in the future. While the outlines of a potential final agreement between Iran and the P5+1 that would relieve many sanctions on Iran is taking shape, it is too early to assume success. U.S. policymakers will need to enhance their ability to impose tough additional energy sanctions in the future. This is critical as an element of contingency planning on Iran policy and to provide a credible threat that more oil sanctions on Iran are possible if Tehran does not cooperate with the international community.

The failure to prepare for the potential future imposition of more energy sanctions by stimulating alternative oil supplies may render the threat of new sanctions hollow. If adversaries do not believe that the United States and its allies have the economic and political tolerance to cope with a self-imposed oil price increase, which could occur if more sanctions pull more oil off the market, these adversaries may call a bluff. Furthermore, allies of the United States, many of whom have reluctantly gone along with energy sanctions in the past, may prove unwilling to participate in further energy sanctions unless the United States makes a serious effort to stimulate alternative oil supplies. Lifting the U.S. oil export ban will bring online additional U.S. production, and would constitute an important signal to allies, adversaries, and market participants alike, that the United States is serious about the threat, or actual use, of forceful energy sanctions.

CONCLUSION

In a period of tremendous geopolitical uncertainty, and when many questions exist about the future role of the United States as a global energy player and world leader, Washington has a unique window of opportunity to strengthen domestic economic growth, energy market stability, U.S. global leadership and open trade relations. At a time of lower prices, we need to stop discriminating against U.S. producers. Removing the outdated and detrimental limits on the export of U.S. natural gas and crude oil will advance these goals. It will deepen trading ties with strategic allies, including those in Europe and Northeast Asia. It will improve the economic position and energy market stability of our nation and partners abroad, and allow the United States to more effectively spur and lead multilateral action to counter international security threats. Our closest allies in Europe and Asia have asked for greater access to U.S. oil and gas. Policymakers should embrace these multitude of benefits for allies and ourselves and liberalize our energy export rules. Market conditions merit such a step, and national security dividends from the unconventional energy revolution will not be fully realized without it.

Senator BARRASSO. Thank you, Mr. Gordon. I appreciate your comments.

And Mr. Webster.

STATEMENT OF JAMIE WEBSTER, SENIOR DIRECTOR, IHS ENERGY, IHS, WASHINGTON, DC

Mr. WEBSTER. Chairman Barrasso, Ranking Member Udall, and members of the committee, I appreciate you calling this hearing today to talk about this important topic. And I appreciate the opportunity to testify before you on the immense changes in the energy market, how it has already impacted the United States, its allies and partners, and the importance of a liberal energy export policy and free markets to fully maximize its positive impact.

I appear before you in my capacity as Senior Director for IHS, where I lead the company's short-term crude oil markets team. In that role, I travel regularly, meeting global exporters and importers, participating in policy discussions here in D.C. as well as OPEC meetings. This provides me with a perspective on North America's changing role in energy and its global context.

Today, I want to address how free trade has already changed the flow of oil and petroleum products, and how allowing crude oil to join gasoline, diesel, natural gas, electricity, and coal as a fuel that can be readily exported and would benefit U.S. interests and consumers.

One of the key policy changes needed to help support this shift is the liberalization of U.S. oil exports. Energy flows into and out of the United States have already provided partial benefits to the region and the world. In July 2010, the United States imported 1.1 million barrels a day from Nigeria, an OPEC member. Because of U.S. supply, this has shrunk to nearly nothing, while, at the same time, we are now exporting to Nigeria a large share if its refined products, such as diesel and gasoline. This change in refined product flows to Nigeria reflects a broader change in U.S. flow patterns for all of the refined product fuels.

Ten years ago this month, the United States was importing, on a net basis, 2 million barrels per day of refined products. This has now reversed direction, and the United States is now exporting more than 2 million barrels a day, on a net basis, to countries around the world.

U.S. refiners are some of the most advanced in the world, and, with these low-cost inputs, they have been able to further exert their global standing, providing not just U.S. consumers with valuable fuels, but consumers around the world, while improving our own position.

The United States has a liberal trade policy for natural gas, coal, refined products, processed condensate. It also allows oil exports to other countries, in certain very specific cases. Allowing U.S. producers to seek out international markets for their product will allow them to receive global prices, keeping the laboratory of U.S. shale technology and production fully open for business, allowing it to support our allies around the world. It also supports job growth across many industries and in places far from the oil fields here in the United States. It will also help to lower the price of Brent oil, the benchmark price for global oil, much as the increase in production already has. Lowering the Brent price is the access point to lower gasoline prices, as U.S. gasoline prices are linked to the Brent price and not to the WTI price that we have here in the United States.

This ban hurts American consumers, causes an unnecessary drag on American productivity, and does not let the United States exploit fully the national security benefits from our energy resurgence. The reasons are intertwined with the nature of the American refinery system, and the price discounts that American producers at times have had to take in order to sell their products competitively to refineries, particularly along the gulf coast, which holds over half of the Nation's total refining capacity. Over $85 billion has already been spent in the past quarter century to reconfigure these refineries to process heavy oil imported from countries such as Venezuela, while also making them available to take the heavy oil from Canada.

The United States contains the largest refining capacity of any country in the world, with 140 operating refineries with a combined crude oil distillation capacity of about 18 million barrels a day. This system is characterized not only by the number and size of refineries, but also by the number of world-class, high-complexity, full-conversion refineries with a substantial degree of petrochemical and specialty products. In this complex refining system, if the crude quality varies enough, the refineries cannot run optimally with their designated operating parameters. In the gulf region, most refineries are configured, as I said, to process this heavy crude oil. Unfinished products are the result of this crude mismatch, which then have a lower value because they require further processing to be further upgraded into the fuels that consumers like. In many cases, this mismatch is large enough that a refinery will have to reduce the crude oil throughput to process additional volumes. As a result, there are limits to how much volume can be processed in these refineries. To fully use this amount, this often requires a price discount, limiting the full impact for U.S. producers.

I look forward to your questions and appreciate your time.

[The prepared statement of Mr. Webster follows:]

PREPARED STATEMENT OF JAMIE WEBSTER

Chairman Barrasso, Ranking Member Udall, and members of the committee, I appreciate the opportunity to testify before you on the immense changes in the energy market, how it has already impacted the United States, its allies and partners, and the importance of a liberal crude export policy and free markets to fully maximize its positive impact, regardless of the global price of oil.

I appear before you in my capacity as Senior Director for IHS where I lead the company's short-term crude oil markets team. In that role I travel regularly, meeting global exporters and importers, plus participating in policy discussions in Washington, as well as OPEC meetings. This provides me with a perspective on North America's changing role in energy and its global context. IHS is a global research and consultancy firm, with 9,000 employees around the world, that specializes in energy, capital-intensive industries, data and analysis with a worldwide presence. My work through IHS has involved me in two landmark studies on crude oil exports ("U.S. Crude Oil Export Decision" and "Unleashing the Supply Chain.")

Today I want to address how free trade has already changed the flow of oil and petroleum products, and how allowing crude oil to join gasoline, diesel, natural gas, electricity, and coal as a fuel that can be readily exported would benefit U.S. interests and consumers.

The catalyst for the oil price decline that started last summer was the partial (and temporary) return of Libyan production. But it was the underlying growth in U.S. oil production from 5.6 million barrels a day (MMb/d) in 2011 to the current 9.5 MMb/d that sustained this price drop. OPEC's decision last November 27 to not cut production in the face of growing volumes, not just from United States shale oil, but also the Gulf of Mexico as well as Canada further hastened the price decline. It seems unlikely that OPEC will reverse itself in its upcoming Ministerial meeting on June 5. OPECs decision, reaffirmed on June 5, appears to have marked the beginnings of a serious shift in how supply and demand is balanced in the global market, potentially allowing the oil market to be a market-based system rather than relying on a balancer as has often been the case in the past. The balancer as defined here is that group, regulatory body or other organization that is willing and able to quickly reduce or increase oil supply in an attempt to keep the market balanced.

The boom in U.S. production has the potential to upend the need for a formal market balancer, leading to lower oil prices for consumers, while increasing energy security for not just the United States but the world. This is possible not only because of the large production volumes that U.S. producers have brought to the market, but because of the character of those flows. Conventional production projects can take years to finance, plan, and bring to the market. U.S. shale producers can do it in 4 months. Globally, conventional production has a decline rate of 5–6 percent, meaning a project will be producing that much less each year. U.S. shale production has an initial decline rate of about 50 percent. These two factors allow the U.S. shale system to react quickly to market signals to bring more oil onto the market, and a lack of investment when prices turn downward can quickly reduce supply. This shift from OPEC to the market-driven forces of shale oil is far from certain and far from complete and it could be reversed.

One of the key policy changes needed to help support this shift is the liberalization of U.S. oil exports. Energy flows into and out of the United States have already provided partial benefits to the region and the world. In July 2010, the United States imported 1.1 MMb/d of oil from Nigeria. Because of U.S. supply, this has shrunk to nearly nothing, while at the same time we are exporting a large share of its refined products (diesel, gasoline, etc). The change in refined product flows to Nigeria reflects a broader change in U.S. flow patterns for gasoline, diesel, and other important consumer fuels. Ten years ago this month, the U.S. net imports of refined products was over 2 million barrels per day. This has now reversed direction and the U.S. net export balance is over 2 million barrels per day of exports. U.S. refiners are some of the most advanced in the world, and with low cost inputs they have been able to further exert their global standing, providing not just U.S. consumers with valuable fuels, but consumers around the world.

The United States has a liberal trade policy for natural gas, coal, refined products and processed condensate. It also allows oil exports to other countries in certain, very specific cases. Allowing U.S. producers to seek out international markets for their product will allow them to receive global prices, keeping the "laboratory" of U.S. shale technology and production fully open for business, while supporting job growth across many industries and in places far from the oil fields. It will also help to lower the price of Brent, the benchmark price for global oil, much as the increase in production already has. Lowering the Brent price is the access point to lower U.S. gasoline prices because U.S. gasoline prices are linked to the Brent world price, not the domestic WTI price.

Moreover, maintaining the ban increasingly undercuts U.S. credibility in its three-decades endeavor to persuade other nations to permit free flows of energy trade and not constrain trade in strategic commodities with political restrictions and resource nationalism. The United States, for instance, has launched numerous complaints under the WTO against China exactly because of these kinds of restrictions on natural resources that China imposes.

The IHS report, "Unleashing the Supply Chain," documents the benefits across the economy from 2016–2030:

- $86 billion in additional GDP;
- About 400,000 new jobs annually;
- 25 percent higher pay for workers in the energy industry supply chain—an additional $158 per household; and
- $1.3 trillion in federal, state, and municipal revenue from corporate and personal taxes.

The benefits accrue across most of the United States, not just oil producing states. States like Illinois, Washington State, Massachusetts, and Michigan—with little or no oil production—also benefit substantially in terms of economic activity and jobs, owing to the interconnected nature of U.S. supply chains. The report affirms earlier research that eliminating the export ban would reduce gasoline prices by 8 cents per gallon.

Eliminating the crude oil export ban proves even more important when oil prices are low. For example, if Brent crude (the international standard) trades in the range of $55/barrel and WTI trades in the United States at around $45/barrel, many companies will be on the margins of their new well investment breakeven point. In such a case, a small price change can have a major impact on supply because it can make or break the profitability of a significant share of tight oil producers and because it may determine whether an investment decision is made or not. Crude oil production thus drops even more sharply when prices are low and producers must take further price cuts to sell to domestic refiners if they cannot export. A $3 per barrel change in a $50-per-barrel price environment can have the same effect as a $10 change in a $100-per-barrel environment.

Liberalization of the U.S. crude export policy could potentially mitigate this risk, though this option would depend (as do refineries, pumping stations, etc.) on ready access to electricity—a key reason the 2008 disruption was so acute.

So why do we have the ban, and given the current tight spread between Brent and WTI is there any reason to modify it? Its existence is due to an anachronism that grew out of a period of scarcity in the 1970s when the United States imposed price controls on oil and banned the export of oil in order to support the price controls. In the wake of the 1973 Arab oil embargo, the Emergency Petroleum Allocation Act of 1973 allowed President Nixon to set price controls and allocate oil to end users in the United States. The Energy Policy and Conservation Act of 1975 prohibited the export of crude oil and natural gas produced in the United States, with some exceptions. The U.S. system of price controls on oil was abolished in 1981, as was, a few months later, the ban on the export of oil products. However, illogically, the ban on crude oil exports was retained even though the rationale provided by price controls had disappeared. The United States now has the fastest growing oil production in the world. Since 2008, American entrepreneurship has increased U.S. crude oil output by ~81 percent—4.4 million B/D principally of light tight oil, such as Eagle Ford in south Texas, Bakken in North Dakota and West Texas Intermediate (WTI). This increase is the fastest in U.S. history and exceeds the combined production gains from the rest of the world. The commercial and technical reasons for this increase in production are well documented, including the May 2014 IHS report, called “U.S. Crude Oil Export Decision.” The conditions that justified the crude oil export ban in 1973 no longer apply.

More importantly, continuation of this ban hurts American consumers, causes an unnecessary drag on American productivity, and does not let the United States exploit fully the national security benefits from our energy resurgence. The reasons are intertwined with the nature of the American refinery system and the price discounts that American producers must take in order to sell their products competitively to refineries, particularly along the Gulf Coast, which holds over half of the nation’s total refining capacity. Over $85 billion has been spent in the past quarter century to reconfigure these refineries to process heavy oil imported from countries like Venezuela, Mexico, and Canada. The United States contains the largest refining capacity of any country in the world, with 140 operating refineries with a combined crude oil distillation capacity of about 18 million B/D. The U.S. refining system is characterized not only by the number and size of refineries but also by a high number of world-class, high-complexity, full conversion refineries with a substantial degree of petrochemical and specialty products integration.

In this complex refining system, if the crude quality varies enough, the refineries cannot run optimally within their designed operating parameters. In the Gulf region, most refineries are configured to process heavy crude oil. When using light tight oil, Gulf refineries operate inefficiently.

Unfinished products are the result of this crude mismatch, which have a lower value because they require further processing to be upgraded into gasoline, jet, and diesel fuels. In some cases the crude quality mismatch is large enough that a refinery will have to reduce the crude oil throughput to process additional volumes of light tight oil. As a result, there are limits to how much of the new, domestically produced light tight oil the refining system can efficiently and effectively process. To fully use light tight oil, many Gulf Coast refiners often require a price discount. Allowing crude oil exports would allow light tight oil (i.e., WTI) to sell at higher world prices. In “U.S. Crude Oil Export Decision,” IHS estimates that eliminating the WTI discount would incentivize nearly $750 billion more in investment from 2016 to 2030—and increase oil production by 1.2 million B/D.

This brings me to Mexico. That country is eager to extend its imports of U.S. natural gas to include oil. For now, Mexican oil production is in decline and gaining access to U.S. light tight oil will help boost those refineries supply options, particularly as they are now best suited to use American light tight oil instead of its own heavier Maya oil. Mexico could enter into a "swap" arrangement, exporting its own oil in exchange for American light tight oil. However the constraints of the crude export policy as well as the commercial requirements to put in this specific swap are causing difficulties in effecting a trade that would benefit both countries. Liberalizing U.S. oil exports would allow a more simple transaction, while retaining all the benefits.

While we are now contending with an oversupplied global oil market, additional volumes from countries like Mexico and Canada will continue to be important in the coming years particularly with supply from these nations potentially being heavier than U.S. supply allowing it to be complementary to U.S. production growth.

I appreciate, Mr. Chairman, your leadership and that of this committee to address these critical issues for U.S., regional and global energy security.Thank you for this opportunity to testify before your committee. I welcome the chance to respond to your questions.

Senator BARRASSO. Thank you very much, Mr. Webster.

Commander Lippold.

STATEMENT OF CDR KIRK S. LIPPOLD, USN (RET.), PRESIDENT, LIPPOLD STRATEGIES, LLC, ALEXANDRIA, VA

Commander LIPPOLD. Mr. Chairman, Ranking Member Udall, my name is Commander Kirk Lippold, and I greatly appreciate the opportunity to testify before the subcommittee, especially in the perspective of national security.

In my 26-year career in the Navy, I was a surface warfare officer serving on five different ships, including guided missile cruisers and destroyers, to protect U.S. national security interests across the globe. Foremost among those missions was to safeguard the sea-lanes of communications, or SLOCs, that facilitate the global economy, including oil imports to the United States.

I have experienced firsthand, particularly during my command of the USS *Cole*, when it was attacked by al-Qaeda terrorists during a routine refueling stop, the devastating effects of reliance on imported oil when our forward-deployed assets are placed in harm's way.

The U.S. Navy has a unique role in the world, in cooperation with our allies, to ensure the safe conduct of trade, including oil. Since the 1970s, we have had policies in place to encourage energy independence that include investment in energy research and efficiency, diversity of fuel inputs, and the strict regulation of oil exports.

Before we drastically alter these long-standing and successful policies, we should proceed with great caution to evaluate the real-world consequences. Despite the recent impressive boom in domestic crude oil production, the fact is, the United States remains overly dependent on oil imports. In fact, the volume of oil that the United States imports is not altogether different from import levels at the time the Energy Policy and Conservation Act was enacted in the 1970s. While increased domestic production has reduced the total amount of oil that the United States imports from abroad to meet its domestic needs, we still import a staggering amount of oil. According to the U.S. Energy Information Administration, imports in 2014 totaled more than 2.6 billion barrels, or around 30 percent of supply. By all accounts, domestic consumption will continue to outpace domestic production for the foreseeable future.

As numerous national security experts and U.S. Presidents have observed over the course of decades, there are significant national security benefits to decreasing our reliance on imported oil supplies. Decreasing that reliance on unfriendly or dangerous regimes has the effect of removing a significant obstacle to achieving our foreign policy and national security objectives. At its most basic, relative energy independence leaves the United States and its leaders with more workable options when dealing with other countries.

The original purpose of export regulations was to bolster national security by furthering energy independence. That purpose still holds true. Lifting export regulations may have the unintended consequence of undermining our national security goal of energy independence.

Precipitously lifting the regulation of exports would not confer equal strategic benefits. Advocates of lifting the export ban frequently point to Russia's aggressive invasion in Ukraine as a ready opportunity for the use of energy diplomacy. That notion makes little sense.

As an initial matter, all credible economic studies on the subject project that the vast majority of U.S. crude oil exports purchased on world oil markets would make their way to Asia, not Europe. Indeed, the number one beneficiary of lifting the ban is likely to be China, a nation whose recent activities in the Pacific and South China Sea reflect more the actions of a rival hegemon for security dominance in the transpacific region than a responsible international partner.

The United States does not need to export crude oil to influence international markets. Other countries are better off because the United States is producing more of its own supply. With strict export regulations in place, the United States gets the dual national security benefits of ample supply and leverage on the international stage. Attempting to alter the market forces that influence the distribution of power across the world stage is always risky business, so it is important to consider the potential downside risks to any dramatic realignment.

We must also consider the second-order effects such a change would have on United States allies whose economies rely on crude oil production to survive, such as Nigeria or Azerbaijan. Nigeria produces nearly the same type of crude oil as the United States and, therefore, is a country most likely to suffer if significant U.S. crude oil exports materialize. Nigeria's economy is, to put it mildly, extremely dependent on oil. As I am sure every Senator on the subcommittee is aware, the terrorist group Boko Haram retains control over large parts of the country and threatens to turn Nigeria into a failed state. If the Nigerian economy falls into a tailspin, the consequences for international security would be dire. The safety of American civilians and military personnel across North Africa would be placed at risk.

Military assets mobilize on petroleum products like gasoline, diesel, and jet fuel. They do not run on crude. So, a change in export policy that would undermine our robust refining base directly constrains the operational flexibility we have in rapid mobilization necessary for modern force projection. While tempting from the perspective of gaining a commercial foothold in a new market arena at this time, the national security implications of changing the existing policy regulating the export of crude oil is rife with unknown and probably unintended consequences that must be fully considered and addressed. Too many times in my career I have experienced the stark reality of not thinking through the impact of changes in international and domestic policy.

Today, we are in the midst of impressive new domestic production and discovery of untapped reserves. However, we continue to import virtually the same volume as—foreign oil as when regulations passed into law. The day may come when the United States is no longer overly dependent on oil imports, and then we may be in a position to change our export policy. But, for the sake of our national security, that day is not today.

[The prepared statement of Commander Lippold follows:]

PREPARED STATEMENT OF CDR (RET.) KIRK LIPPOLD, USN

I. INTRODUCTION

Mr. Chairman, Senator Udall, my name is CDM Kirk Lippold. I appreciate the opportunity to testify before the subcommittee. In my 26-year career in the Navy, I was a surface warfare officer serving on five different ships, including guided missile cruisers and destroyers to protect U.S. national security interests across the globe. Foremost among those missions was to safeguard the sea-lanes of communications, or SLOCs, that facilitate the global economy, including oil imports to the United States. I have experienced firsthand—particularly during my command of the USS *Cole* when it was attacked by al-Qaeda terrorists—the devastating effects of reliance on imported oil when our forward-deployed assets are placed in harm's way. The U.S. Navy has a unique role in the world in cooperation with our allies to ensure the safe conduct of trade, including in oil. Stemming from concerns born out of the oil embargo of the 1970s, we have had policies in place to encourage energy independence that include investment in energy research and efficiency, diversity of fuel inputs, and the strict regulation of oil exports. Before we drastically alter these longstanding and successful policies, we should proceed with great caution to evaluate the real-world consequences.

II. THE UNITED STATES IS STILL IMPORT DEPENDENT DESPITE SIGNIFICANT GAINS IN DOMESTIC ENERGY PRODUCTION

Despite the recent impressive boom in domestic crude oil production, the fact is that the United States remains overly dependent on oil imports. In fact, the volume of oil that the United States imports is not altogether different from the import levels at the time the Energy Policy and Conservation Act was enacted in the 1970s.

While increased domestic production has reduced the total amount of oil that the United States imports from abroad to meet its domestic needs, we still import a staggering amount of oil. According to the U.S. Energy Information Administration (EIA), imports in 2014 totaled more than 2.6 billion barrels, or around 30 percent of supply. By all accounts, domestic consumption will continue to outpace domestic production for the foreseeable future. In its 2015 Annual Energy Outlook, EIA estimates that total imports will not fall another 10 percent until 2040.

At this point, lifting crude export regulations would likely dampen the predicted decline in imports. As U.S. supplies are exposed to a growing demand on international markets, the price discount that the United States has been enjoying for several years will dissipate. Imports will be relatively more competitive with domestic supplies. The likely result: greater reliance on imports than would otherwise have taken place. Independent of any specific price trajectory, the option of distributing crude oil to international buyers will eliminate discounts in shale prices that have benefited the U.S. market by encouraging reliance on domestic resources. To an appreciable extent, the "discounted" price of Bakken shale (located in the northern United States and Alberta, Canada) is a result of infrastructure challenges in delivering oil to markets. Access to overseas markets would provide producers with a workable alternative, allowing them to increase their prices.

As numerous national security experts and U.S. Presidents have observed over the course of decades, there are significant national security benefits to decreasing our reliance on imported oil supplies. Decreasing our reliance on unfriendly or dangerous regimes has the effect of removing a significant obstacle to achieving our foreign policy and national security objectives. At its most basic, relative energy independence leaves the United States and its leaders more workable options when dealing with other countries. The original purpose of export regulations was to bolster national security by furthering energy independence; that purpose still holds true. Lifting export regulations may have the unintended consequence of undermining our national security goal of energy independence.

III. SECURITY BENEFITS TO CHANGING EXPORT REGULATIONS ARE UNLIKELY TO MATERIALIZE AT THIS POINT

Precipitously lifting the regulation of exports would not confer equal strategic benefits. Advocates of lifting the export ban frequently point to Russia's aggressive invasion in Ukraine as a ready opportunity for the use of energy diplomacy. This notion makes little sense. As an initial matter, all credible economic studies on the subject project that the vast majority of U.S. crude oil exports purchased on world oil markets would make their way to Asia, not Europe. Indeed, the number one beneficiary of lifting the ban is likely to be China, a nation whose recent activities in the Pacific and South China Sea reflect more the actions of a rival hegemon for security dominance in the transpacific region than a responsible international partner.

U.S. exports would be a drop in the bucket of global crude supplies. Moreover, European refineries, especially those in Eastern Europe, are currently configured to process Russia's medium sour crude. Reconfiguring those facilities to handle American light sweet crude would be an expensive, long-term proposition. Eastern Europe also lacks the infrastructure to access U.S. crude imports. Constructing the needed European pipelines would take a great deal of time and money. Whether any U.S. oil actually reaches Eastern Europe and "displaces" Russian supplies would depend on market factors largely unrelated to U.S. exports.

Assuming for a moment that lifting the export ban would dramatically undercut Russia's crude exports to Europe, it is far from clear that the result would be a more moderate and amiable Russian Government. First, the Russian Government has taken greater control of their oil companies in preparation for using that resource as a crude weapon on economic influence. Second, Russian oil companies would be able to lower their prices and find alternative markets, most prominently in Asia. Third, President Putin has proven time and again that his first response to economic hardship at home is to engage in aggression abroad to stoke feelings of nationalism among his supporters. And lastly, there are a variety of ways the United States can marginalize Russian oil companies and curtail their diplomatic reach without resorting to a "price shock" strategy. A good example of one workable alternative is a set of carefully crafted economic sanctions, which Congress passed and President Obama implemented in 2014 with notable results. Unlike the crude export ban, these measures can be altered rapidly in response to events and do not put our allies at risk.

Fortunately, the United States does not have to choose between participating in the international marketplace for petroleum products and lifting crude export regulations. Current law already allows American companies to export refined products overseas. Likewise, the federal government has the flexibility to waive regulations for crude in the form of condensates. In fact, exports of finished petroleum products have risen from 1 million barrels per day in 2005 to 2.7 million barrels per day in 2014. In particular, a robust transatlantic trade in refined products allows our European allies to reap the benefits of our high-tech, efficient refineries at a competitive price. It allows us to satisfy our own security concerns and also address our allies' needs with the products actually needed for strategic and economic concerns abroad.

Finally, the United States does not need to export crude oil to influence international markets. Because increased domestic production results in reduced dependence on imports, overseas crude is then "freed up" to be bought and sold in other markets. This market shift has the second-order effect of increasing the supply of crude outside the United States, reducing prices and alleviating bottlenecks. Other countries are better off because the United States is producing more of its own supply. With strict export regulations in place, the United States gets the dual national security benefits of ample supply and leverage on the international stage.

IV. DEREGULATION OF OIL EXPORTS NOW CAN HAVE ADVERSE CONSEQUENCES FOR SECURITY

Attempting to alter the market forces that influence the distribution of power across the world stage is always risky business, so it is important to consider the potential downside risks to any dramatic realignment. Let us assume for the sake of argument that advocates of lifting crude export regulations are correct, and that lifting the ban would result in large volumes of U.S. crude being sent overseas to the detriment of other producers like Russia. We must also consider the second-order effects such a change would have on U.S. allies whose economies rely on crude oil production to survive, such as Nigeria or Azerbaijan.

Nigeria produces nearly the same type of crude oil as the United States. Therefore, Nigeria is the country most likely to suffer if significant U.S. crude oil exports materialize. Nigeria's economy is, to put it mildly, extremely dependent on oil. Thus, it should come as no surprise that the sharp decline in the price of oil that took place in 2014 is having a dramatic impact on Nigeria's economic vitality. Their currency is appreciating, inflation is rising, and international investors are leaving. The lower oil price also cuts into government revenues, which are a critical source of basic services for the Nigerian population. Amidst this growing state of economic turmoil, security risks abound. As I'm sure every Senator on the committee is aware, the terrorist group Boko Haram retains control over large parts of the country and threatens to turn Nigeria into a failed state. Should the Nigerian economy fall into a tailspin, the consequences for international security would be dire. Boko Haram could grow in influence and manpower, filling the vacuum created by potential economic collapse. Nigeria would present a fertile training ground for extremists preparing to launch attacks against the U.S. mainland. The safety of American civilians and military personnel across northern Africa would be placed at risk.

As one of Nigeria's closest allies and its biggest trading partner, the United States has a tremendous interest in forestalling these outcomes. Lifting the crude export ban in an attempt to reengineer global oil markets is more likely to exacerbate instability than it is to increase our bargaining power with Russia.

In addition, the crude export ban improves the competitiveness of U.S. refineries. When refiners have access to reliable domestic oil supplies, significant cost-savings translate into a more favorable price outlook for both refiners and U.S. consumers. This situation is a desirable one. A strong domestic refining base provides the United States with significant and underappreciated national security benefits. Lifting the crude export ban would expose one of America's most important industries to the unpredictable vagaries of international markets and international politics. It is axiomatic that military assets mobilize on petroleum products, like gasoline, diesel, and jet fuel. They do not run on crude. So, a change in export policy that could undermine our robust refining base directly constrains the operational flexibility we have in rapid mobilization necessary for modern projection of force.

V. CONCLUSION

While tempting from the perspective of gaining a commercial foothold in a new market arena at this time, the national security implications of changing the existing policy regulating the export of crude oil is rife with unknown and probably unintended consequences that must be fully considered and addressed. Too many times in my career, I have experienced the stark reality of not thinking through the impact of changes in international and domestic policy. We cannot afford to just wave-off these potential consequences as inconsequential under the guise of market principles. The regulation of crude oil exports was put in place with a long-term of objective of decreasing U.S. reliance on foreign sources of energy, specifically oil. Over the past three-plus decades, progress has waxed and waned. Today, we are in the midst of impressive new domestic production and discovery of untapped reserves. However, we continue to import virtually the same volume of foreign oil as when the regulations were passed into law.

The day may come when the United States is no longer overly dependent on oil imports and we may be in a position to change our export policy but that day is not today.

Senator BARRASSO. Thank you so much for your testimony.

We will start with 7-minute rounds of questions, go back and forth, if it is agreeable to the members of the committee. And I will start.

Mr. McNally, in terms of lifting sanctions on Iran's oil exports, Iran receives a tremendous amount of its revenue from oil exports.

Over the years, Congress put in place sanctions on Iran's energy sector. The administration is currently working toward a deal on Iran's nuclear weapon program which will likely remove sanctions on Iran oil exports. And the economists had it at up to 800,000 barrels a day. In 2014, the largest purchasers of Iranian crude oil and condensate were China, India, Japan, South Korea, Turkey. The United States currently has a de facto ban on U.S. exports of crude oil to these same markets. Do you believe the United States should allow Iran to increase exports of oil while prohibiting the United States companies and producers from accessing these same markets?

Mr. MCNALLY. Mr. Chairman, until and unless there is a good nuclear deal with Iran, my view has been—and I actually wrote an op-ed in 2006 calling for quarantining Iranians' oil exports—I do not think we should allow Iran to sell any crude at all. But, as you mentioned, under the current sanctions regime—and there are two parts. One is the United States, which has required Iran's importers to significantly reduce their oil imports, and now, under the interim deal, the remaining six importers are supposed to hold steady, even though we have seen a steady creep-up in the amount of Iran's oil exports to 1.4 million barrels a day, I believe, according to the IEA in its most recent report. Also, importantly, Iran is exploiting a loophole in the United States sanctions regime through which it exports condensates, which is a light form of crude oil, and it is doing quite well, quite a brisk business with condensates. As my colleague mentioned, while some condensates of the United States are allowed to be exported, those require permitting and so forth, and some are not. So, we restrict our own condensates.

The major restraint on Iran's oil exports, however, is the EU oil embargo. That caused Iran's oil exports to drop by about 5- to 600,000 barrels a day, which is what Iran used to send to Europe. My understanding is, if there is a deal, United States sanctions would lift quite quickly, so the existing six, including China, South Korea, and Japan, could buy more Iranian crude oil, but that the Europeans will take several months—many months, perhaps—before they lift the oil embargo. But, over time, Iran will be allowed back. I was at international meetings with Iranian officials who made very clear they are coming back hard onto the market, they are going to recapture their oil market share that they have lost. Meanwhile, as I mentioned in my testimony, U.S. exporters will remain shackled.

Senator BARRASSO. So, why is it also important, then, that U.S. national security, in our national security interests, to allow our allies and partners to purchase American oil to diversify away from Iran?

Mr. MCNALLY. Well, it is important for several reasons. One, it is important because if this deal—if we strike a deal and it fails, or if Iran cheats, we are going to go back and ask the Europeans to continue to extend their embargo. And they are not enjoying it. A lot of Mediterranean—weaker Mediterranean European countries imported a lot of Iranian oil, and they want to get back into that market. And they are refraining. We will ask them to continue that. We will also go back to our friends, especially South Korea and Japan, which have significantly reduced their imports from

Iran, and ask them to reduce even more. I believe the Senate was looking at legislation in the spring that would close the condensate loophole, as well.

So, in a snap-back of sanctions or a tightening-of-sanctions scenario, we would be asking more Iran's importers, and I think it would only be fair and reasonable, and we ought to expect to be asked, to make our oil available to them in return.

Senator BARRASSO. Okay.

Mr. Gordon, in your testimony, you talked about, "When our closest allies are stronger, the United States is more secure, better able to bolster and lead multilateral security initiatives." In what ways has the dependence of our allies on Russian energy resources impacted the ability of the United States to bolster and lead multilateral security initiatives?

Dr. GORDON. Well, I think that European dependence on Russian gas sources has been a major source of the failure of Europe to come up with a coordinated gas strategy that the United States has been urging on the Europeans for a very long time. And again, here I think that, while I agree with Commander Lippold that there is not a short-term solution to the Ukraine crisis from U.S. gas that, I think, adding U.S. gas exports to the broader mix from which European allies can choose gives them a lot more flexibility vis-a-vis Russia. It is already actually leading to a strengthening of those forces in Europe who want to have a more coordinated policy. And I think a loosening up of our restrictions would definitively help support the continuation of sanctions by the Europeans on Russia, which is, frankly, at risk.

Senator BARRASSO. Yes. I mean, that was my concern, as well. I was in Ukraine, in eastern Ukraine, on Friday. On Saturday—I was with the President, as well as with the Prime Minister on Saturday, and the mayor of Kiev. That is exactly what I am hearing from them. And then I think it would allow others, as you say, willing to participate in additional energy sanctions against countries like Iran and Russia if the United States were able to lift that.

Mr. Gordon, also, in terms of Asia, in your testimony, you said, "Energy insecurity is one of the major drivers of China's regional assertiveness." You went on to note, "Policies that confer mutual benefit on the United States and a group of Eastern Asian nations facing off as regional competitors should be priorities for the United States," that "they may help to deter strategic intraregional competition," you say, "by increasing the shared incentives for stable, efficient market activity."

How could U.S. energy exports help our East Asian allies and promote stability in that region?

Dr. GORDON. Well, the lead demand of our East Asian allies on the economic and security arenas have to do with the Transpacific Partnership, which I am optimistic is going to move forward, and to—for the United States to unshackle the export of energy across the Pacific. I think our Asian allies see two benefits to this. One is, they see a direct benefit in their own energy security from a stable source of supply that makes them less dependent on the Middle East. But, secondly, I think they are all interested in anything that boosts the overall resilience of the global energy markets that may lead, over time, to China becoming less assertive in buying up oil and in their efforts to create maritime facts on the ground in the South China Sea. A China that is increasingly dependent upon United States energy exports is more likely to think twice about its assertive stance. Again, this is not something that changes quickly, but, over time, I think it is a very important complement to our strategy of military strength in the Western Pacific.

Senator BARRASSO. Thank you very much.

Senator Udall.

Senator UDALL. Thank you, Chairman Barrasso.

Mr. Webster and anybody else on the panel who would like to answer this question, my understanding is that the Congressional Research Service, in 2013, concluded, and I quote, “If all the proposed U.S. LNG export projects were operational today, the United States would rank first in the world for global export capacity.” And that is the end of their quote there. Do you agree with this conclusion? And what would this mean for industry states, such as New Mexico, where companies are waiting for the right demand signals to begin accessing reserves of natural gas?

Mr. WEBSTER. Thank you for your question, Ranking Member.

I would agree with the statement from the Congressional Research Service that, if everything that was on the table in 2013 was now operational today, that we would easily eclipse Qatar and anybody else that happened to try. The one caveat to that is, of course, there is a real difference between those that put in an application and those that are able to actually get through the process. But, even if you limit it to that smaller scope, it is still a substantial amount that would rival Qatar.

In terms of the State of New Mexico and getting the sort of signals that those producers would want, which is essentially a higher price, as we have been dealing with very, very low prices that, for many producers, just do not make sense, it is actually an assortment of not just exports, but also increased use from power demand, from petrochemical projects, and a number of different solutions that will just help this country, both use its own natural gas more effectively, but also export it more to our allies.

Senator UDALL. Any of the other panelists want to jump in on that? Okay.

Mr. Webster, if the United States continues its ban on exports of crude oil, what are the ramifications, economically, in States that are now extracting light, tight oil? And why should we be worried about oversupply in the short term?

Mr. WEBSTER. That is a interesting question, in that, if you do not allow the export of crude oil, the economic implications actually extend well beyond just those States that are extracting crude oil. We did a—I just conducted a study that went State by State and congressional district by congressional district, and you can see that, you know, the change in a crude export stance has huge ramifications across the United States, even for States that do not necessarily allow the use of fracking. So, I think that, right now, is a significant hamper on some additional jobs. If you allowed crude oil exports, you would see an addition of about 400,000 jobs a year; 2- to 3,000 of those jobs would be in your own State.

The second part of that, in terms of the oversupply—the oversupply is where you are talking about it from just the United States standpoint, where they are not able to get their crude oil out, and you start to have the sort of discounts that we have seen in the last couple of years at various points. When that happens, that ends up creating a policy discount for these producers, and they are just not able to produce as much because they are not able to make the sort of investments they would have been able to make otherwise.

Senator UDALL. Commander Lippold, you have been at the tip of the spear of the complex global energy system. Based on your experience, do you believe that U.S. troops are at risk of increased harm as a result of increased U.S. dependence on foreign crude? If Congress were to remove the export ban, in which regions could we see increased risk as a—risk to our forces as a result?

Commander LIPPOLD. Thank you, Senator.

Yes, those forces are going to be at greater risk. I believe that if you look at today, we are still dependent, at 7 million barrels a day being imported into our Nation. That is a huge amount; almost 30 percent. And if you continue to be dependent, getting into a position where you are now trying to export it when we have not even created an overarching national security policy that deals with energy production across the board, not just crude, but in other ways, in fact, could adversely affect it; because, while the Navy goes out and does, in fact, protect the sea-lanes of communication as a matter of making sure that the economies of the world can operate freely on the high seas, it is when you start affecting the oil supply through world chokepoints that you really are putting the troops at a higher risk and into areas, especially when you look at the Strait of Hormuz, the Strait of Malacca—China is obviously going to be affecting things in the South China Sea. So, as those supplies tighten, they would be done. However, you have to look at it from the perspective: U.S. national security interests have to come first. And until we develop that overarching energy policy and we get much less dependence than we have today, the ban really does need to stay in place.

Senator UDALL. Commander Lippold and others on the panel, because there is no ban on the export of refined oil products, some believe that refiners will eventually reinvest in their facilities so they can make use of more domestic crude. What would the economic and security impacts be if the United States were to continue with the current status quo, where crude exports are banned, but refined products are not?

Commander LIPPOLD. Senator, I think that the fact that we can take refined product today and use that to bolster our allies—first and foremost, if you look at Europe, the fact that the militaries of the world and economies run on refined product, they do not run on crude—and when you look at all the different types of crude that are produced by various nations around the world, each of their refining capacities or refining capabilities have to be adjusted to adapt to the different types. So, you are asking for some countries that may have been working with one type—say, medium-sour—now having to shift to that light-sweet that we produce, the light-tight oil. Then it makes a drastic difference.

And so, I think that in the—at the end of the day, the fact that we are able to have a capacity and capability to get an export—refine products to respond much quicker than we could with crude to bolster our allies in Europe or in the Pacific rim—is far more of a greater leverage for us, from a national security perspective, than it is to be able to lift an export crude ban.

Senator UDALL. Yes, please, Mr. McNally.

Mr. MCNALLY. Mr.—Senator, it—to answer your question, if we leave the crude oil ban in place, what every study has shown is that eventually, as my colleague Mr. Webster said, the amount of oil that we are now newly producing as light, tight oil is going to overwhelm the capacity of our existing refineries to process it. We built our refineries, if you will, to process coffee grounds, really heavy, gunky oil from Mexico and Canada. And, by the way, half of our oil imports come from our neighbors and friends, Mexico and Canada. The surprise was, the kind of oil we found is sort of like champagne, and our refineries are built to run coffee grounds. And so, if we keep on producing champagne, eventually those coffee-ground refineries, they may decide to invest in new equipment. But, to do so, they are going to require a discount, they are going to drive a low price from those producers. And that is where the risk to our boom comes. It is bad enough that we live at the whims of OPEC and global supply/demand that sends the price of oil to—from $110 to $42 in 6 months. That is bad enough. But, when, on top of that, our producers have to face an eventual discount from the coffee-ground refineries, we are going to drive prices down further. It risks killing the goose that is laying the golden eggs.

Senator UDALL. Thank you.

Senator BARRASSO. Thank you, Senator Udall.

Senator Gardner.

Senator GARDNER. Thank you, Mr. Chairman.

And thank you, to the witnesses, for testifying today.

Commander, thank you for your service.

Last year, I carried H.R. 6 in the House of Representatives. It was our bill to expedite the permit approval process for LNG exports. We had variety of witnesses testify before the committee, just like we have this year. To a person, they have talked about how important it is, the people supporting this effort, to allow the United States to move forward on exports like LNG and what it meant for their national security. Counterarguments were made, saying, “Hey, look, there would not be a single molecule that you could actually ship here, so it would not really do anything.” The response of the people in that country, indeed, were, “Yes, it would. It would immediately give us more leverage and more negotiating power, and it would send a signal to the world that the United States is serious about providing and equipping its allies with energy security.”

And, as my work on the East Asia Subcommittee has shown, every meeting that I go into that starts with an Ambassador from Singapore or beyond talk about the importance of U.S. energy security and our ability to export energy, and what it would mean to their security. We are talking, right now, about the Trade Promotion Authority, we are talking about TPP, we are talking about trade issues. We talk about it from an economic standpoint, we talk about it from a security standpoint. And if you look at this energy debate, every single one of them understands that, as the United States economy has improved because of this incredible revolution in energy production that we have gone through, they realize that that same benefit could extend to them through energy security. No longer would they have to be beholden only to one provider or a pipeline that could be shut off in the middle of winter if the United States was serious about providing and extending its security umbrella through energy development to our allies around the globe.

One of the interesting dynamics, of course, of the House vote last year—and again, this is on the LNG side—were people who represented States that had enacted moratoriums on hydraulic fracturing. Perhaps these States had outright banned hydraulic fracturing. But, they acknowledged that the only reason we are in a position to be able to export an abundance of energy is because of hydraulic fracturing, coupled with new technologies like horizontal drilling. And there were many people who represent those States that had moratoriums in place that actually supported the LNG—the expedited LNG permitting bill because they recognized the security that it could provide to our allies.

And so, while their State has banned or imposed moratoriums on hydraulic fracturing, they understand that the only reason we have enough to export is because of hydraulic fracturing, and they understand that, because of that increase in supply, it actually provides additional security to our allies.

And so, I think this argument over exporting really does need to finally be more than just talking and actually have actions put in place by Congress and this administration to allow it to move forward and to happen.

In the Commander's testimony, he stated this, and I wanted to follow up, because, I think, Mr. McNally, you were talking about this. It said, "It is axiomatic that military assets mobilize on petroleum products like gasoline, diesel, and jet fuel. They do not run on crude."

Mr. McNally, we are not exporting crude, correct? That is what this debate is about. Do we export gasoline, diesel, and jet fuel, or could we?

Mr. MCNALLY. Senator Gardner, we certainly do. As my colleague pointed out, we used to be a net—10 years or so ago—importer of refined product—gasoline, distillate, liquified petroleum gas, et cetera. Now we are a net exporter. We send China liquified petroleum gas. So, it is a free and open market in the export of refined product. It is just crude oil that is restricted.

Senator GARDNER. Mr. Webster, a question for you on impact of continued development. And if we have an excess supply in this country, what happens to production in this country?

Mr. WEBSTER. Thank you for your question, Senator.

If we have an excess of production, meaning that the prices is going down, one, the first thing that you see is, you see it start filling up in stocks, and you start seeing significant discounts at refineries, which you have seen at various points in the past. And then, the second order of effects is the sort of things we have already started to see. Companies start laying down rigs, they start laying off workers, they start slowing that production down. And, because of the extreme decline rates, which is the lower production you get out of a well after a period of time, you actually start seeing a slowdown in U.S. production. And so, you know, to echo Mr. McNally's statement, you start to kill off the goose that laid the golden egg.

There is no question that, globally, we are in a lower price environment, and a policy change is not going to change that. But, a policy change can impact that policy discount that we have seen at various points to at least provide U.S. producers the opportunity to compete on a global level.

Senator GARDNER. And what happens, then, with a slowdown in production, economically?

Mr. WEBSTER. So, economically, with a slowdown in production, you end up having a reduction in GDP within the United States, you end up having reduction in revenues to State, Federal, and local governments, and you end up having to eventually start to again start importing oil again and reducing our energy security.

Senator GARDNER. And what happens to the price with a decrease in production?

Mr. WEBSTER. With the decrease in production, longer term, we end up going back to the sort of prices that you saw in 2008, $147.

Senator GARDNER. And what would the economic impact of 400,000 new jobs a year be, that you mentioned in one of your responses to a question?

Mr. WEBSTER. Sure. So, what that ends up doing is, you end up having—let me just get the figure real quickly here—about $86 billion in additional GDP between now and the next couple of decades. So, it is quite significant.

Senator GARDNER. Thank you.

And I will yield back my time to the chairman, but I do just want to say, again, I think there are people throughout this chamber in the Senate and the House, who recognize the importance of moving forward on our export potential, and that this presents our allies with one of the most innovative ways of helping themselves provide security for their people, their country, simply through the incredible production of the American worker.

Thank you, Mr. Chairman.

Senator BARRASSO. Thank you, Senator Gardner.

Senator Markey.

Senator MARKEY. Thank you, Mr. Chairman, very much.

I have long warned this committee about the consequences for American consumers and our economy of large-scale exports of American natural gas.

The Department of Energy—our Department of Energy—has said that exporting less than half of the volumes of LNG already approved could increase U.S. prices for American consumers by up to 54 percent. That could translate into a de facto energy tax on American consumers, businesses, and our economy of up to $62 billion a year, a regressive energy tax on American consumers if we export LNG in the amounts that are only half of the level already approved.

And we cannot even be sure that the exports are going to go to the Ukraine, because we believe in capitalism. We are not a state-run oil industry. We cannot control where this oil or natural gas is going to go. We are a system that allows the—Rex Tillerson to have his hand on the tiller at ExxonMobil to direct where oil and natural gas goes. And that is toward the highest price.

Now, right now—and I am just going to focus on oil—consumers are saving at the pump because U.S. oil prices are lower than the international benchmark price. A recent Barclays report found that U.S. consumers saved $11 billion at the pump last year because of lower U.S. oil prices, and will potentially save up to $10 billion this year. We change policies, energy tax on ordinary Americans, which, from my perspective, is regressive and it is wrong.

We are having a refining and shipbuilding boom in our country because of the increased production, coupled with the export ban. There are more than 800,000 barrels per day of refining capacity additions or upgrades that are in the works in the United States, according to industry analysts. Many of those refinery upgrades involve investments of $300 million or more. The private sector in the United States refining sector is responding to this crude oil. They are building and expanding the refining capacity with American jobs here, right now, and that is why the United States steelworkers and the AFL–CIO are opposed to lifting the oil ban, because we, otherwise, will not create those jobs.

Now, U.S. shipbuilders have orders to expand our domestic tanker fleet capable of transporting crude oil by nearly 40 percent. Each tanker can represent an investment of $100-to-$200 million. Five years ago, there were zero orders for new domestic oil tankers. One company, Aker ASA in Pennsylvania, right now has nearly a $1-billion/4-year order backlog and has tripled employment over the last 3 years. American companies responding here by creating new jobs in already existing industries that otherwise were going away under this export policy. Shipbuilding, refining—gone, overseas. That is this plan. That is the heart of it.

When we still import nearly 5 million barrels of oil every day, that would harm our national security. We are neck and neck with China as the world's largest exporter—importer. The Department of Energy forecasts that we will continue to import millions of barrels of oil a day for the foreseeable future. When we are still importing 5 millions barrels of oil a day, every barrel that we would send to one of our allies means an additional barrel that we are going to have to import from a potentially unstable region of hostile countries. And, mind you, we are still exporting young men and women in uniform over to the Middle East to protect those ships bringing in oil from unstable parts of the country. How can we export our oil when we are still importing 5 million barrels a day? That is just wrong. And it is wrong especially to those young men and women in uniform. We should be creating energy independence here in the United States of America.

Oil and natural gas are not like any other commodity, they are not like widgets, they are not like iPhones. This is the central commodity. You look at ISIS, you look at the Shiites, the Sunnis. Where are they going? For the oil-producing regions. Whether it be Yemen, whether it be Iraq, whether it be Syria, they are going for the oil. They are not going for the widgets, they are not going for the iPhones. Oil, gas, national security, that is what it is all about.

It is not like any other product. It is the heart and soul of our national security.

So, let me ask you this, Commander Lippold. We do not have state-owned oil companies in the United States. We cannot direct ExxonMobil to send oil exports to specific countries. They will be making decisions about where any crude oil exports would go based on the market and what is best for their bottom line, not on what might be best for U.S. foreign policy. Is that not correct?

Commander LIPPOLD That is correct. If we start to export oil, we have no control on where it will go. And it is not a free market that is out there. When you look at the vast majority of oil controlled by either national oil companies or cartels like OPEC, we are not entering into a free market system, by any stretch.

Senator MARKEY. Commander Lippold, according to the Department of Energy, lifting the crude export ban would reduce the investment in the U.S. refining sector by nearly $9 billion over the next decade, and could mean 1.6 billion barrels a day less of domestic refining capacity in our own country. Refineries on the East Coast and other parts of our country could potentially close. Is that not a national security concern if we do not have sufficient domestic refining capacity and are reliant on foreign nations to provide us with critical fuels like gasoline, diesel, and jet fuel?

Commander LIPPOLD Yes, Senator, it is.

Senator MARKEY. Let me ask you this. According to Mr. Webster at IHS, the number one destination for export of U.S. light, sweet crude oil would be China. Is that correct, that the bulk of the United States exports would likely go to China and Asia, Mr. Webster?

Mr. WEBSTER. Thank you for your question, Senator.

Yes, actually you would see a great deal of volumes go to China, as well as some of the technology that would be there, as well. However, it is incorrect to state that the "bulk" would go to China. China would be just one potential market buyer of this crude. And I would also agree with you that you—if you do not change the export ban, you absolutely will continue to have significant refinery investments of about $3 billion. However, on the production side, you are missing out on around $756 billion in investments.

Senator MARKEY. So, even as we are trying to pass a free trade bill so that we set the rules, not China—we dictate, not China—we are simultaneously talking about exporting the most precious of all raw products, and it will go to China because they will be the high bidder, sending back finished product for us to purchase in the United States of America.

So, I guess what I would say is, let us build the ships here, let us build the refining capacity here, let us drill here, let us have consumers in America get the benefits here, let us have the petrochemical industry here get the benefits, let us have an economy that is robust using this incredible bonanza of energy that we now have, and lowering our unemployment rate, and showing what the real might of our country is. That is what I would do, rather than exporting this oil and gas so that China and other countries then take our most precious resource and undermine our ability to be able to protect our own citizens. That stops in its tracks if we lift this export ban.

I thank you, Mr. Chairman, very much.

Senator BARRASSO. Thank you, Senator Markey.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you all very much for being here today. I am sorry I missed your testimony because I was at another commitment.

But, I returned, last weekend, a week ago, from a conference in Poland that was focused on Eastern Europe. And one of the major issues there was Russia and Putin's aggression in Eastern Europe, and Ukraine, and what could be done to address that. And obviously, one of the big concerns that I heard from the countries whose representatives I met with from Eastern Europe was concerned about their dependence on Russian energy and what could be done to address that.

Now, one of the people I met with was an official from Ukraine who talked about—one of the efforts that they are looking at is how to reduce their dependence on that Russian energy through energy efficiency. And I know that your testimony is focused on exports of oil and gas, but is there not also a role for export of our technology around efficiencies that we ought to be looking at as we are thinking about what opportunities we have to influence the global market around energy?

Anybody.

Dr. GORDON. Thank you, Senator Shaheen.

I think, absolutely, that export of energy-saving technologies has to be an important piece of what we are doing. We do not have restrictions on that. So, the issue here is that we have a set of restrictions on the very things that our most important allies are calling for us to lift, both in Asia, in Europe, especially in Eastern Europe. So, I think that the theme that we are focusing in on here is the national security implications of beginning to loosen that up, and to do so in a way that can both secure our economy at home while responding to these challenges abroad.

Senator SHAHEEN. And I appreciate that. I am suggesting, though, that maybe we are thinking too narrowly about how we are thinking about this issue, and that we ought to be thinking broader about what other exports of energy—energy technologies that we can provide that is part of a comprehensive national security energy policy that will help us address the energy challenges that we are facing around the world, and that efficiency technologies ought to be a piece of that.

So, let me go from that to asking you, Commander Lippold. You testified that a day may come when the United States should alter our export policy, but today is not that day. So, what conditions do you think would have to be met for us to proceed with changing our export policy around oil?

Commander LIPPOLD First, I would think that we would need a significant reduction in the amount of oil that the United States is currently importing to make our economy run. And the second thing would be development of an overarching strategy, which you suggested, to say, "We need a comprehensive energy policy that is folded in and a component of our entire national security strategy in foreign policy." Because, until then, we are just going to be nitpicking and solving little symptoms right here, when we are not getting to the crux of the problem, which is developing that national security strategy of which energy independence is a component, and how we are going to achieve that, and what we are going to work with.

I have not advocated that the ban should remain in place forever, but I have said now is not the time. When you are at 30 percent, you do not want to be in a position where we are saying, "Congratulations, you have completed 8 of your 12-step program. Let us go celebrate with our friends and have a round." Now is not the time, because of our dependence that we currently have. And I think that we need to develop that overarching strategy, reduce dependence, and take a look at that ban in the context of a larger discussion.

Senator SHAHEEN. And so, are there positions between totally ending the export ban and staying where we are that we should be looking at that might be reasonable? Should we be thinking about a phased approach to addressing this that goes on over a period of time? And when we reach certain goals, in terms of reducing our dependence on imports, that we can then look at opening the market a certain amount and—thinking about it in those terms? Is that a reasonable place to be thinking about this so that we are not talking about either opening—ending the ban tomorrow or leaving it in place for the next 10 years, but we are looking at some phased approach that might make sense? At——

Commander LIPPOLD Yes. Thank you, Senator. That is a——

Senator SHAHEEN [continuing]. At you or anybody else.

Commander LIPPOLD [continuing]. That is a great question, and really does go to the core, because we cannot answer that question right now. Without this overarching strategy for the United States to be able to approach how we are going to work toward energy independence while we are going at it piecemeal until we have that strategy in place, we really cannot set the benchmarks and say, "Well, when we are down to 10 percent, we can open it up and export X-number, or, when we get to 5 percent, we can export X-number." I think we need to look at it. And it may end up being on a sliding scale. It may be that, when we hit a certain amount, we can say, "We have reached a point, combined with other resources that we are exporting, like LNG, that we have—in fact, have influence to where it is affecting foreign policy and our national security objectives are being done." Plus, we have to see what the state of the world is. We are not an independent actor. It is also going to depend on the security conditions for our allies, not only in Europe, but in the Pacific rim and, quite fundamentally, in the Middle East.

Senator SHAHEEN. Mr. McNally.

Mr. MCNALLY. Thank you, Senator Shaheen.

I would start by observing that—just that the great majority, if not totality, of bipartisan energy and foreign policy experts regard the crude oil ban as, at best, an anachronism, and, at worst, a direct threat to our oil boom and a problem in our foreign policy. If it served some purpose, then we might want to debate balancing that public purpose against the benefit of lifting it. But, it serves no public purpose. It just threatens the goose.

So, in an ideal world, I would think, respectfully, we would just get rid of it right away. However, in a less-than-ideal world, perhaps we would look at options such as allowing treaty allies or free-trade-agreement countries or countries that continue to respect sanctions against Iran to have access to our oil. That, perhaps, would be half-a-loaf approach. But, fundamentally, since there is no public justification for the ban, there really is no reason not to just strike it entirely.

Senator SHAHEEN. Other views? Mr. Webster? Mr. Gordon?

Mr. WEBSTER. Yes, I would agree with Mr. McNally. I mean, it is—and I am—as a markets guy, I would be very hesitant, you know, putting in, "If we hit this, then you will allow this." Realize that this is a market thing. So, if you had allowed crude exports in 1981, as you allowed petroleum product exports, you would have not seen any real crude exports in significant volumes until late 2013. And today, you probably would not see many volumes, as well; but, probably later this year, you would see volumes. It is—part of it is a—is, over time, you will see it as a seasonal thing; and then, over time, as the U.S. production continues to grow, because it is given this full global price, then you will start seeing more and more volumes.

But, if the price does not make sense, in terms of an arbitrage, those volumes are not going to go there, so the market, itself, will kind of solve that issue that you are looking at.

Dr. GORDON. Senator Shaheen, I think that the way to address this is to address what are the pressing national security concerns here, and who do you put in the category. And again, here I think that the trio really is treaty allies, it is participants in FTAs, and then it also has to do with using this as a tool to encourage the retention of the capability to sustain sanctions on Iran, or to put them back into place.

Senator SHAHEEN. Thank you, Mr. Chairman. My time is up.

Senator BARRASSO. Thank you very much, Senator Shaheen. You know, I mean, it is interesting that you said you were in Poland. Over the recent recess, I was in Slovakia—I am sorry, I was in Slovakia over the weekend, but, over the last recess, Estonia, Romania, the Czech Republic. And what I am hearing, in terms of the use of the technology, is that Vladimir Putin is supporting funding green groups—extreme green groups to then get in—politically involved in the home countries to prevent the use of this technology, not because of a change in his position on the use of fossil fuels, but as an effort to keep them from not producing their own and taking it and making them continue to be dependent upon Russian energy. So, it is—I mean, it is a very interesting interplay of the way that Putin plays this game.

Mr. McNally, the Wall Street Journal, on May 20, "Leon Panetta, Stephen Hadley: The Oil Export Ban Harms National Security." I think you have seen the article. It states that, "The moment has come for the U.S. to deploy its oil and gas in support of its security interests around the world." They say, "Too often, foreign policy debates in America focus on issues such as how much military power should be deployed in the Middle East, whether the U.S. should provide arms to the Ukrainians, or what tough economic sanctions should be imposed on Iran." The article concludes, "Ignored is a powerful nonlethal tool, America's abundance of oil and natural gas. The U.S. remains the great arsenal of democracy. It should be the great arsenal of energy."

So, I am going to have this article put in the record.

Senator BARRASSO. Less than a month ago, William Cohen, former Secretary of Defense, wrote an article in Time magazine titled "Why President Obama Should Export Crude Oil." He talks about the strategic benefits of lifting the ban.

And I am going to have that article also submitted to the record.

[EDITOR'S NOTE.—The two articles mentioned above can be found in the "Additional Material Submitted for the Record" section at the end of this hearing.]

Senator BARRASSO. Mr. McNally, you served as a senior director of International Energy on the National Security Council for President George W. Bush's administration. You have extensive experience evaluating the national-security/foreign-policy matters facing our Nation. Do you agree with these former Defense Secretaries, Panetta and Cohen, about the benefits of crude oil exports and U.S. security?

Mr. MCNALLY. Thank you, Chairman Barrasso.

I certainly do. And again, as I said in my prepared testimony, it harkens back to a time in our country when there was confidence in bipartisan support in our energy position globally. And again, when we were an arsenal of energy, when we did step up and backstop our allies with energy supplies. Now, in today's world, we are not as powerful and big in the oil markets as we used to be. But, as we have discussed this afternoon, it does not take a lot of oil or gas to be exported to have real impacts. Matter of fact, you do not have to export any, just the—offering the option of exports helps. So, I certainly do agree that.

I will say, Mr. Chairman, what I pleasantly discovered during my White House experience—and my only prior government experience was in the Peace Corps, sir, so this is my first time—was how, when it came to serious energy issues, there was bipartisanship. Democrats and Republicans, when it comes to the serious, hard energy policy questions, more often than not saw things similarly, and there was this commonality that I think you see now with the crude oil export debate and that you have seen in the past in our country's history.

Senator BARRASSO. Great.

Mr. Gordon, let us see, you authored a "Crude Oil Export and U.S. National Security." It was a very good piece—I am going to ask that this also be put in the record.

Dr. GORDON. Thank you.

[EDITOR'S NOTE.—The article mentioned above was too voluminous to include in the printed hearing. It will be retained in the permanent record of the committee.]

Senator BARRASSO. It is interesting, when you get to page 16, some of the things I have underlined, address public concerns. It says, "Acknowledge and address public concerns regarding perceived negative effects on gasoline prices of exporting oil." I mean, it almost sounded, from some of the questioning by some of the members——

Dr. GORDON. Yes.

Senator BARRASSO [continuing]. That they think that we burn crude, when, in fact, we actually burn gasoline. And could you kind of help talk us through that a little bit?

Dr. GORDON. Yes. So, I think that the public that we really need a public engagement process, because I think—I mean, while I do not agree with Senator Markey's views that—there is no question that his views represent how a lot of people think about this. And so, it is a absolutely legitimate issue that he raises, and I think that is the key for addressing this. And I mean, I think that the—to my mind, the unconventional energy revolution is one of the most significant contributors to enhancing U.S. power and potential in the world that we have seen in recent decades, and that—I think that the risk of killing that golden goose are very, very profound, and it would really seriously undermine the United States. That means that we need to have a very big debate about the issues that Senator Markey raised, because the American public and, indeed, lots of Members of Congress are worried that it really is a zero-sum game here. I will defer to Mr. Webster and Mr. McNally to talk about some of the arguments. I am not an energy economist, I am a foreign policy analyst. But, I very much am of the view that the pathway for getting from here to there lies through a public debate that addresses these very, very real and critical issues that Senator Markey was talking about.

Senator BARRASSO. Well, and I appreciate that, because, as one of our colleagues—not on this committee, but in the Senate—said to me—he invited me to come to one of his townhall meetings, and he said, "I want you to stand up there and explain to the people in my hometown why exporting crude is actually going to help lower the cost of gasoline at the pump." Because, as you say, it is not. So, I am going to take you along with us if we go, thank you. [Laughter.]

Mr. Webster, in terms of the OPEC decisions on crude oil, there has been a lot of speculation about the decision of OPEC to not cut oil production. Some individuals believe that Saudi Arabia and other OPEC members are trying to put pressure on Iran and its nuclear ambitions. People feel that OPEC is trying to encourage Vladimir Putin to abandon his support for the Assad regime. I mean, you can read a lot out there. Other folks say OPEC is trying to undermine America's crude oil production.

Given our interest in deterring Iran and Russia, do you believe it is a good time to lift the ban on exporting crude from the United States?

Mr. WEBSTER. Thank you, Chairman.

Yes, I was at the OPEC meeting, both on November 27 and just earlier in June, where they made that decision and continued that decision, partly, in fact, because of what is going on with U.S. production, recognizing that they were in a difficult spot to be able to push against it.

Right now, to me, I—and I understand some of the concerns that people have that exporting crude oil is going to raise gasoline prices. It has not. Actually, the—right now, this boom in U.S. production kept us from very, very high prices before 2014 because of all of the outages we had from Iran and other places. And allowing continued oil production to the maximum extent allowed under a global oil price is only going to increase both U.S. energy security, but also global energy security. I am—often been quoted as saying that a—you know, a free barrel of oil anywhere increases energy security everywhere. And being able to bring all of those barrels to the fore both to supply U.S. refiners and U.S. consumers, but also global refiners, as well, is the sort of move that we need to make now that is going to allow us to continue to push back and continue to force OPEC to make these sorts of decisions and essentially become a free-market group.

Senator BARRASSO. Thank you.

And, Mr. McNally, in terms of natural gas, February this year, President Obama's Council on Economic Advisors, they issued an economic report for the President, said, "An increase in U.S. exports and natural gas, and the resulting price changes, would have a number of mostly beneficial effects on natural gas producers, on employment, on U.S. geopolitical security and the environment." The report explains that more U.S. natural gas exports would result in—as they say—an increase in GDP ranging from .05 percent to .17 percent in different export scenarios. It says that the U.S. natural gas exports of 6 billion cubic feet per day could support as many as 65,000 jobs. In addition, the report found that more U.S. natural gas exports would have, "a positive geopolitical impact for the United States. Specifically"—and this is, again, the President's Council on Economic Advisors—"Specifically, it explains that the U.S. natural gas exports," they say, "builds liquidity in the global natural gas market, reduces European dependence on the current primary suppliers, Russia and Iran."

And I see, Mr. Gordon you are shaking your hand up and down in agreement, as well. So, do you agree with the economic report of the President, that increasing U.S. exports of natural gas will result in increased GDP and create new jobs, have a positive geopolitical impact on the Nation?

Dr. GORDON. Chairman Barrasso, I certainly do. And I think that report just repeats many private-sector studies that were done by Mr. Webster's organization and others and the Department of Energy, frankly, which, when it considered its policy on export facilities. Had it believed Senator Markey's scenario of 54 percent price increases, I am sure the Secretary of Energy and President Obama would never have accelerated and streamlined the export approvals. The—that was a—that was an extreme case. That was not the reference-based case. So, I think it is been well understood in this country for several years. And again, as I said in the outset, to your credit and your colleagues' credit, that this gas boom, in particular, offers enormous economic and national security benefits. We saw that with Japan after the Fukushima disaster. That came clear to us during Russia's aggression last year. It is something that is real—that has resulted in clear, tangible benefits in which the President, to his credit, and his advisors, has acknowledged.

Thank you.

Senator BARRASSO. Yes.

And a final question, Mr. McNally. In case—I am trying to decide if I want to take you along with me with Dr. Gordon, here, when we go to this townhall meeting in a State that is not my own. Would you explain how expanding crude oil—exporting crude oil would lower gasoline prices at home in the United States?

Mr. MCNALLY. Sure. I would be happy to join you, Senator. And that is a sincere promise. I would be happy to go and do that. And I will admit it is somewhat counterintuitive, because we associate gasoline price increases from the 1970s like a nightmare with the rise in oil imports back then. But, the way it works in the oil market, it is a global pool. And we—our gasoline prices are set by the price of crude oil in the global pool. So, what matters is how much oil is going into the pool and coming out of the pool.

And, as Mr. Webster said, the more oil—crude oil—we can add to the world, the lower will be the price of crude oil globally and, therefore, the price of gasoline here. We need the crude oil export ban, or we need the option to export some types of our oil, in order to sustain production to keep our production high and the global price low.

So, bottom line, get rid of the ban, which is not helping consumers right now. I want to be very clear. The Barclay study that Senator Markey mentioned has been widely discredited. That was written by equity analysts cherrypicking data from 2000—2008 and 2009. The truth is, an EIA and other government agencies have also found, as have private-sector organizations, that the gasoline prices in the United States are not set by WTI, the U.S. price. The discount that U.S. producers have been forced to accept is not helping consumers. It is only helping some refiners, who are earning very—even fatter margins than they are already.

And so, net-net, sir, get rid of the ban. We will have more supply. If we have more supply, the price will go down for everybody.

I will be happy to join you, sir.

Senator BARRASSO. Well, and finally, Mr. McNally, I understand that the Congressional Budget Office, the Government Accountability Office, and the Federal Reserve Bank of Dallas, as well as the Energy Infrastructure—Information Administration, has made the same findings.

Mr. MCNALLY. Yes, sir. And, if I may, in a spirit of bipartisanship, I think the most passionate and articulate encapsulation of this argument was made by Mr. Summers, the former Treasury Secretary of President Obama. And I think that he clearly said that—what we all know, really—that Economics 101 works, sir. And if we add to global supply, we will have lower prices for everybody. It is just that simple. More supply, lower prices.

Thank you, sir.

Senator BARRASSO. Well, I want to thank each of you for being here today.

The record will remain open for a period of time. There may be some submitted questions. I hope you get those answers back to us promptly.

This was very informative. We had good bipartisan participation. So, thanks so much for your testimony.

The meeting is adjourned.

[Whereupon, at 4:20 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

[FROM THE WALL STREET JOURNAL, MAY 19, 2015]

THE OIL-EXPORT BAN HARMS NATIONAL SECURITY

The U.S. is willfully denying itself a tool that could prove vital in dealing with threats from Russia, Iran and others.

(BY LEON E. PANETTA AND STEPHEN J. HADLEY)

The United States faces a startling array of global security threats, demanding national resolve and the resolve of our closest allies in Europe and Asia. Iran's moves to become a regional hegemon, Russia's aggression in Ukraine, and conflicts driven by Islamic terrorism throughout the Middle East and North Africa are a few of the challenges calling for steadfast commitment to American democratic principles and military readiness. The pathway to achieving U.S. goals also can be economic—as simple as ensuring that allies and friends have access to secure supplies of energy.

Blocking access to these supplies is the ban on exporting U.S. crude oil that was enacted, along with domestic price controls, after the 1973 Arab oil embargo. The price controls ended in 1981 but the export ban lives on, though America is awash in oil.

The U.S. has broken free of its dependence on energy from unstable sources. Only 27% of the petroleum consumed here last year was imported, the lowest level in 30 years. Nearly half of those imports came from Canada and Mexico. But our friends and allies, particularly in Europe, do not enjoy the same degree of independence. The moment has come for the U.S. to deploy its oil and gas in support of its security interests around the world.

Consider Iran. Multilateral sanctions, including a cap on its oil exports, brought Tehran to the negotiating table. Those sanctions would have proved hollow without the surge in domestic U.S. crude oil production that displaced imports. Much of that foreign oil in turn found a home in European countries, which then reduced their imports of Iranian oil to zero.

The prospect of a nuclear agreement with Iran does not permit the U.S. to stand still. Once world economic growth increases the demand for oil, Iran is poised to ramp up its exports rapidly to nations whose reduced Iranian imports were critical to the sanctions' success, including Japan, South Korea, Taiwan, Turkey, India and China. U.S. exports would help those countries diversify their sources and avoid returning to their former level of dependence on Iran.

More critically, if negotiations fail, or if Tehran fails to comply with its commitments, the sanctions should snap back into place, with an even tighter embargo on Iranian oil exports. It will be much harder to insist that other countries limit Iranian imports if the U.S. refuses to sell them its oil.

There are other threats arising from global oil suppliers that the U.S. cannot afford to ignore. Libya is racked by civil war and attacks by the Islamic State. Venezuela's mismanaged economy is near collapse.

Most ominous is Russia's energy stranglehold on Europe. Fourteen NATO countries buy 15% or more of their oil from Russia, with several countries in Eastern and Central Europe exceeding 50%. Russia is the sole or predominant source of natural gas for several European countries including Finland, Slovakia, Bulgaria and the Baltic States. Europe as a whole relies on Russia for more than a quarter of its natural gas.

This situation leaves Europe vulnerable to Kremlin coercion. In January 2009, Russia cut off natural gas to Ukraine, and several European countries completely lost their gas supply. A recent EU "stress test" showed that a prolonged Russian supply disruption would result in several countries losing 60% of their gas supplies.

Further, revenue from sales to Europe provides Russia with considerable financial resources to fund its aggression in Ukraine. That conflict could conceivably spread through Central Europe toward the Baltic States. So far, the trans-Atlantic alliance has held firm, but the trajectory of this conflict is unpredictable. The U.S. can provide friends and allies with a stable alternative to threats of supply disruption. This is a strategic imperative as well as a matter of economic self-interest.

The domestic shale energy boom has supported an estimated 2.1 million U.S. jobs, according to a 2013 IHS study, but the recent downturn in oil prices has led to massive cuts in capital spending for exploration and production. Layoffs in the oil patch have spread outward, notably to the steel industry. Lifting the export ban would put some of these workers back on the job and boost the U.S. economy.

Why, then, does the ban endure? Habit and myth have something to do with it. U.S. energy policy remains rooted in the scarcity mentality that took hold in the 1970s. Even now, public perception has yet to catch up to the reality that America has surpassed both Russia and Saudi Arabia as the world's largest producer of liquid petroleum (exceeding 11 million barrels a day). The U.S. became the largest natural gas producer in 2010, and the federal government will now license exports of liquefied natural gas.

The fear that exporting U.S. oil would cause domestic gasoline prices to rise is misplaced. The U.S. already exports refined petroleum, including 875,000 barrels a day of gasoline in December 2014. The result is that U.S. gasoline prices approximate the world price. Several recent studies, including by the Brookings Institution, Resources for the Future and Rice University's Center for Energy Studies, demonstrate that crude oil exports would actually put downward pressure on U.S. gasoline prices, as more oil supply hits the global market and lowers global prices.

Too often foreign-policy debates in America focus on issues such as how much military power should be deployed to the Middle East, whether the U.S. should provide arms to the Ukrainians, or what tougher economic sanctions should be imposed on Iran. Ignored is a powerful, nonlethal tool: America's abundance of oil and natural gas. The U.S. remains the great arsenal of democracy. It should also be the great arsenal of energy.

[FROM TIME MAGAZINE, MAY 27, 2015]

WILLIAM S. COHEN: WHY PRESIDENT OBAMA SHOULD EXPORT CRUDE OIL

"The core of our strength overseas is economic strength at home"

As the battle wages on in Congress over President Barack Obama's signature trade agreements and the needed fast-track trade promotion authority (TPA), the President would be wise to consider alternatives that would enhance his trade legacy and also further our strategic priorities overseas. While energy is not included in the Trans-Pacific Partnership (TPP) or Transatlantic Trade and Investment Partnership (T–TIP) negotiations, many of the same Asian, European, and Latin American partners are calling for greater partnership with the United States on energy issues. By allowing the U.S. to become a stable source of supply to global energy markets, counteracting supply disruptions that will inevitably affect other energy-rich regions, President Obama and Congress can double down on promoting long-term economic growth and reinforcing U.S. foreign policy leadership.

The U.S. can do more with its energy resources to support this strategic vision. A direct way of leveraging this opportunity is to lift the ban on the export of crude oil and accelerate approvals for the export of liquefied natural gas (LNG). A series of policies and laws in the 1970s banned exports of U.S. crude oil with only limited exceptions. This ban is a relic from an age of energy scarcity and should be adjusted to reflect present realities. By working with Congress, and via Executive order, the President can start taking steps today to boost U.S. exports.

There would be four strategic benefits to doing so.

First, energy exports would strengthen NATO and our broader transatlantic relationship at a time of increased Russian aggression. The European Union has responded to Russia's energy stranglehold by proposing policies designed to avoid future crises of supply and promote self-sufficiency. The E.U. antitrust case against Russian energy company Gazprom is important. But more can and should be done to build a strategic U.S.-European relationship on energy security. Working with our allies and partners, a joint effort to reduce Europe's vulnerability to Russian energy coercion would be an important legacy for President Obama and send a signal to President Vladimir Putin that as long as he chooses to use energy as a weapon, the West will defend itself. While it will take years to build the necessary infrastructure to receive more LNG, enhance transport pipelines, and otherwise increase Europe's energy resilience, there is no better time to start than now.

Second, increased energy trade with our Asian partners would add substance to the U.S. rebalance to Asia, serving to bolster the region's energy security and promote the continued economic vitality of allies such as Japan and South Korea, while also offering new areas for possible collaboration with China, India, and ASEAN members.

Third, energy exports could open up a new era of collaboration in our own hemisphere. As Venezuela scales back its energy exports in response to domestic challenges, this presents a strategic opportunity for the U.S. to fill the energy void with the 17 Central American and Caribbean nations that have depended on Venezuelan energy subsidies. Moreover, increased energy integration among NAFTA members would create a North American energy powerhouse that will reinforce the above objectives.

Finally, the core of our strength overseas is economic strength at home. The "shale revolution" has created thousands of jobs, revitalized and expanded the domestic energy industry, spurred breakthrough technology with a global impact, and significantly improved the U.S. trade balance. The U.S. has tripled its exports of refined oil products over the last decade as a consequence of the recent energy boom. American primary energy firms, however, have been unable to capture higher gas and oil prices on the global market. A prudent way to support the continued expansion of the U.S. energy sector and our domestic energy security is to level the playing field by relaxing restrictions on American crude oil and LNG exports. Legislation such as the bipartisan LNG Permitting Certainty and Transparency Act introduced by Senators John Barrasso, a Republican from Wyoming, and Martin Heinrich, a Democrat from New Mexico, and supported by the Energy Department provide a good foundation to build on.

For the first time in a half century, President Obama has the opportunity to rewrite the energy balance of power in our favor and solidify his legacy on trade. President Obama is the only U.S. president in decades who has had the tool of energy abundance at his disposal; he should use it.

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