ENERGY AND STATECRAFT: AMERICAN DIPLOMACY FOR THE ENERGY REVOLUTION

ANDREW HOLLAND

Introduction: America's Energy Outlook is Rooted in History

Part of the American "founding myth" is that to make your fortune, one must "go west, young man" because of the country's vast resources on an open frontier. These seemingly limitless resources powered the country's industrial expansion, helped it win two world wars, and helped turn the country into the richest nation on earth—or so the story goes. And there is truth to it: on the eve of U.S. entrance into World War II in 1940, American oil fields produced 63 percent of the world's oil.¹

This endowment has proved to be a curse as well as a blessing. Of the world's major economies, the United States ranks near the bottom in terms of energy efficiency.² Furthermore, it created a consumer dependence in the postwar years on low oil prices that drove cars, trucks, and the rest of the economy to guzzle ever more petroleum.

To understand American foreign policy and statecraft regarding energy, one has to first understand the longstanding history of abundance, and then pair that with the trauma to policymakers when it became apparent that the infinite resources actually had a limit.

That trauma was instigated four decades ago, with the 1973 OPEC oil embargo in which global oil prices shot up, price controls were enacted, and Americans were forced to wait in gas lines. As the narrative of astounding natural abundance abruptly changed, the American public and their elected representatives were rudely awakened to their vulnerability.

Today, the narrative is changing again. The United

States is in the midst of an energy revolution. The country is producing more oil than it has in almost thirty years. The country has gone from a position where it was expected to need to import significant amounts of natural gas to where it holds more than a century of gas reserves and is completing plans and infrastructure to export significant quantities of gas. This revolution is not just about fossil fuels, though: installation of solar and wind power for electricity is growing at an almost exponential rate, and new standards for efficiency mean that the country can do more with less energy.

The energy revolution is altering America's geopolitical outlook. Around the world, foreign crises have elements of energy diplomacy in them, from the Ukraine crisis, to disputes over territory in the South China Sea, and even the disputes over Iran's nuclear program, among others. Some policymakers have argued for the U.S. to use energy as a "weapon," while others argue for the country to husband its resources for domestic use only.

This essay argues that the role of energy in America's international relations has echoes of both the days of abundance and the days of shortage. For that reason, American actions and policies can sometimes seem contradictory. However, as a global trading power with the naval power to ensure open sea lanes, the U.S. bias is always toward free and open markets. The United States is unique among the world's great powers in that it is both one of the world's largest producers of energy and one of the world's largest consumers. That means that how energy affects American foreign policy is very different than its allies in Europe or Asia, whether Germany, Japan, France, Singapore, or others. American energy statecraft has often been used to support these allies and to

buttress their energy security (sometimes even when they have not asked for it), but that does not mean that American and allied interests always converge. As a general rule, American interests will converge with allies when they favor free and open markets, but when allies seek preferential treatment or work with monopoly producers, then their interests will diverge.

The remainder of this essay will first discuss how American policies have evolved since the 1970s, and how that has affected American national security and foreign policy. It will then discuss how the American bias toward free markets has evolved. Finally, it will offer several case studies for how energy plays into American foreign policy.

A NOTE ABOUT AMERICAN PERCEPTIONS OF ENERGY SECURITY

Because of the bounty of American energy resources, concerns about energy security by American policymakers and the public are almost exclusively about oil. Unlike most other major economies, the United States is able to produce virtually all of the energy domestically that it uses to produce electricity and to heat and cool its buildings. Vast resources (and the infrastructure to utilize them) of coal, natural gas, hydropower, sun, wind, and nuclear power ensure that domestically-produced energy can meet the country's needs. It is only in transportation-with its 94 percent dependence on oil-that American consumers are vulnerable to global swings in prices and to concerns about security and availability. This vulnerability in oil has driven domestic energy policy, national security policy, and foreign policy for four decades since the trauma of the OPEC crisis.

Energy Policy Stuck in the 1970s

To understand U.S. statecraft on energy security, it helps to begin with the response to the OPEC embargo. It is from this crisis that much of American policy on energy stems.

The OPEC crisis was a true economic crisis for the United States, just as it was for American allies in Europe and Asia. As major oil consumers, all of the developed economies were harmed by the steep oil price increases brought about by the OPEC embargo. It initiated the era of "stagflation" in which inflation was paired with mass unemployment. The economic crisis was paired with vast upheavals in both foreign and domestic policy as well. The Watergate scandal, breaking at the time of the embargo, would bring down a president and forever alter the public's trust in government; the withdrawal from Vietnam would humble the country's foreign policy for a decade and leave scars that last through today. When paired with the oil crisis, it seemed that the country no longer controlled its own destiny. In his 1974 State of the Union address, President Richard Nixon exhorted the country: "By the year 1980, the United States will not be dependent on any other country for the energy we need to provide our jobs, to heat our homes, and to keep our transportation moving."³ Even though the ensuing years proved that statement to be misguided and virtually impossible to achieve, in the four decades since that statement, every presidential administration has identified some version of "energy independence" as a central goal. The elusive goal of "energy independence" has animated both American foreign and domestic policy, even if such a goal is neither desirable nor possible in today's globalized world.

Reforms Have Ensured American Energy Security

Today, the United States is one of the most energysecure large countries in the world, by almost any measure.⁴ Importantly, "energy security" does not mean "energy independence" in the sense that all of the energy used in the United States comes from within its borders without international trade. In addition, energy security does not depend on the percentage of supply that is imported. In a world of globally traded commodities, it is no longer possible to be truly energy independent: even domestically produced energy sources are subject to fluctuations in global commodity markets.

In any realistic view, the United States no longer faces traditional "energy security" threats that are existential: the country is not at war with a nation that could stop our access to global markets, nor is there any potential adversary who could possibly take such an action. Since the oil price crises of the 1970s, the risk of absolute oil supply shortages has been reduced significantly. The creation of the International Energy Agency (IEA) and its requirement that all member countries hold oil stocks capable of replacing ninety days' worth of imports acts as a buffer against disruptions in oil supplies. The Strategic Petroleum Reserve acts as a strategic buffer against threats and manipulation by energy-producing states that would seek to affect American policy.

It is not accurate to say that the U.S. relies on any single country for any percentage of oil imports because those percentages change daily. Instead, the U.S. relies on markets to provide the oil the economy needs. As the world's pre-eminent maritime power, one of the prime missions of the U.S. Navy is to assure freedom of the seas—ensuring that global markets are allowed to function. This policy of favoring markets over preferred access to certain countries, regions, or companies is a unique aspect of American foreign and economic policy.

Deep and liquid markets for energy allow price signals to give warnings of impending supply and demand imbalances. Today, then, for the United States, energy security concerns are no longer about physical disruptions in supply. These concerns instead stem from a fear of price increases causing undue harm to economic growth. Finally, as the world faces an unanticipated fall in oil prices, we know that concerns about energy security will once again fall down the political priority list.

The reforms instituted in the 1970s gave the United States and other developed countries real energy security, in the sense that they assured access to energy in a global marketplace. The Strategic Petroleum Reserve, and others like it around the world, provide a shield against possible market manipulation by adversarial energy producers. The IEA provides the world's policymakers and energy professionals with a much deeper level of knowledge about energy production and global prices than was available in the early 1970s. Finally, global trading markets allow for a true global price of oil-seen on newscasts every night-that allows market participants to see potential shortages and problems before they occur. Global energy markets are very different today than they were in the early 1970s.

Oil Dependence Drew America into the Middle East

Even though the United States may not actually be threatened by an energy shortage, for many years, policymakers and the public have come to believe that their security is under threat from oil dependence. Even though good policy reforms have largely solved the country's energy security problems (combined with the luck of living in a country endowed with vast resources), American policymakers came to believe that they must protect the sources of oil with American power. This militarized solution to what is essentially a domestic problem has had long-lasting repercussions on America's relationship with the Middle East.

Once policymakers felt that American dependence on imported oil was a threat, and that access to oil could determine the economic future of the United States, it was inevitable that the U.S. military would be drawn into protecting the oil. The foreign policy response to these developments was the creation of the "Carter Doctrine." In response to Soviet aggression in Afghanistan and threats toward the Middle East, President Jimmy Carter pronounced the doctrine in his 1980 State of the Union address, stating that "an attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States. And such an assault will be repelled by any means necessary, including military force."⁵ The clear reason for this strategic interest in the Persian Gulf was oil stability. This was the first formal commitment of U.S. military power to the Middle East.

To enforce this doctrine and to counter an increasingly belligerent Iranian Revolutionary state, the Carter administration created the Rapid Deployment Joint Task Force. Its mission was to deter Soviet invasion or influence, discourage conflict among regional states, and protect the flow of Persian Gulf oil to the United States and its allies. The Task Force would be reorganized by the Reagan administration into U.S. Central Command, the military command that exists today overseeing operations across the Middle East and Central Asia. Although the U.S. would not fight a war in the Persian Gulf for another eleven years after President Carter made his guarantee, the military was swiftly drawn into local conflicts: during the Iran-Iraq War, the U.S. Navy escorted oil shipments in convoys through the Persian Gulf in the so-called "Tanker War." Notably, thirty-seven sailors were killed aboard the U.S.S. Stark when it was attacked by an Iraqi Air Force plane (even though it can be argued that American policy in this period tilted toward Iraq over Iran). From there (to vastly oversimplify): the 1990 Iraqi invasion of Kuwait led to President George H.W. Bush's security guarantee for Saudi Arabia, the victory over Iraq in Desert Storm, the implementation of a no-fly zone over Iraq, the permanent presence of American troops in Saudi Arabia, extremist reaction against that American presence, the attacks of 9/11, the 2003 invasion of Iraq and the instability and insurgency that followed, the American military surge then withdrawal, the Arab Spring, ISIS, and American military re-engagement in Iraq.

All the while, the American Fifth Fleet based in Bahrain has been guaranteeing oil shipments through the straits of Hormuz—a mission that a 2009 RAND report estimated to cost between \$86 billion and \$104 billion per year.⁶ From what started as a relatively small "Rapid Reaction Force" intended to keep the Soviets from meddling with the flow of oil out of the Persian Gulf, American military engagement in the Middle East has turned into a massive and continuing part of American foreign policy.

The original sin of American military involvement in the Middle East was the understanding that the U.S. no longer controlled its ability to provide its citizens with a stable, secure source of petroleum. This awareness led to a series of military engagements that continue to this day—and have a momentum all of their own. Today, even as the American energy outlook has changed dramatically, the U.S. will remain hopelessly entwined in Middle East security for the foreseeable future. Oil once drove the U.S. to the Middle East. Now, it seems, nothing can pull the U.S. out.

The American Energy Revolution Has Now Changed Everything—And Nothing

Today, more than thirty years past Nixon's deadline,

the United States may actually be on a course to meet that elusive goal of energy independence. Although American oil imports will never completely go away, and in a global marketplace, no country can ever be truly "independent," America is much more in control of its energy future than it has been for at least fifty years.

The U.S. is seeing an unprecedented boom in oil and gas production, as the impacts of the technologies and expertise around hydraulic fracturing and horizontal drilling have expanded America's accessible resources. The shale gas boom means that the U.S. now has more than a century of gas reserves. Similar technology opened up new shale oil fields in places like the Bakken field in North Dakota and Eagle Ford in Texas. Since January of 2011, U.S. crude oil production has increased from 5.5 million barrels of oil per day (mbd) to over 9 mbd in October 2014 (the most recent date for which numbers are available).⁷ See Figure 1 on page 25.

Put together, the combination of rapid growth in renewable sources of energy, a boom in production of oil and gas, and increasingly greater efficiency is a real American energy revolution. The implications are mostly positive: the U.S. is poised to become a major exporter of natural gas over the next decade-while less than a decade ago, energy companies were building natural gas import facilities. Low costs for electricity and natural gas are driving a "manufacturing renaissance" that is seeing a massive "reshoring" of industrial production. Greenhouse gas emissions have dropped since their peak in 2006 due to a combination of greater efficiency, fuel switching from coal to gas for electric power, and the recession. A globalized market for solar photovoltaic production has caused a drop in installed prices of solar panels to less than \$1 per watt. In a time of recession and low job growth, energy has proved to be a valuable tool of economic growth.

Importantly, the American energy revolution was a product of choices about energy made decades ago by politicians and business leaders. Scientists, financiers, and entrepreneurs then sustained their investments in these choices through a variety of market conditions and predictions. Repeatedly, the story for today's energy revolution starts in the energy crisis of the 1970s—and while some investments from that time failed, others are bearing fruit today.

How the American Government Uses Energy in Statecraft

However, policymakers are slow to respond to the revolution—just like the cliché about generals, they are always fighting the last war. American politics is still stuck in the energy battles of the 1970s, with a "Drill, baby, Drill" crowd arguing for expanded access to fossil fuels, while environmental campaigners organize to block any projects that emit greenhouse gasses or intrude on the habitat of any animal. The result of this is a stalemate in which changes to energy and environmental policy can only move forward by going around Congress.

Fortunately, in this case, most foreign policy is made outside of Congress. After the first Quadrennial Diplomacy and Development Review (QDDR) in 2010, Secretary of State Hillary Clinton created a new Bureau for Energy Resources in order to better manage the diplomacy of energy and strategic resources. Under the leadership of first Ambassador Carlos Pascual and now Special Envoy Amos Hochstein, this Bureau has brought energy to the center of many of the State Department's initiatives.

In the Department of Defense, a growing awareness of both the strategic and tactical risks of dependence on oil—and the growing ability to reduce that dependence—led to the creation of a new office of Operational Energy Plans and Programs under then Assistant Secretary of Defense Sharon Burke, as well as empowering energy officials within each of the military services.

Thanks to these bureaucratic changes and to the attention from high-level policymakers in both the Obama administration and Congress, energy is now at the center of American statecraft. However, it comes in many different forms: this is not simply an issue that is the same around the world. Whether it is initiatives like Power Africa or the Caribbean Energy Security Initiative, the response to crises in Ukraine, or the global effort to address climate change, energy is at the center of American foreign policy. A few case studies will show how it works.

RUSSIA AND EUROPEAN ENERGY SECURITY

Ever since the Trans-Siberian Pipeline was first proposed in the late 1970s to link Soviet natural gas to Western European markets via Ukraine, American policymakers have warned European leaders about excessive dependence upon Soviet, and then Russian, energy. In the early 1980s, this concern went so far as for the Reagan administration to place an export embargo on supplies for the pipeline and sanctions on Western European companies that helped build it—leading to one of the most difficult transatlantic disagreements of the Cold War.

Throughout the last two administrations, American policy in Europe has been to promote alternative supplies of energy—especially natural gas—to Europe. The predominant method for this has been to promote the building of a pipeline for gas through the "Southern Corridor" through Turkey, which would provide gas from Azerbaijan outside of the Russian pipeline network. In the winters of 2006 and 2009, the project of energy security in natural gas was given a boost by the cutoff of gas through Ukraine over pricing disputes between Russia's Gazprom and the Ukrainian state energy company. American diplomacy focused on helping European allies find alternative sources and offering support for building an internal natural gas market.

When the crisis in Ukraine began, with the Russian covert invasion and then annexation of Crimea, energy was again at the center of the crisis. For over six months in 2014, no gas flowed from Russia into Ukraine due to a pricing dispute. Fortunately, this dispute happened in the summer, when demand for gas is low, and no one is in danger of freezing to death. American diplomacy accelerated European efforts to provide gas to Eastern European states as a buffer. In addition, the American response to Russia's aggression in the crisis also put energy at the center, as sanctions were placed on energy firms that were invested in helping Russian firms drill for oil and gas in the Arctic. Meanwhile, the concurrent decline in oil prices has dealt a damaging blow to the Russian economy and the ruble.

IRAN

The problem of how to prevent Iran from building a nuclear weapon has bedeviled American foreign policy for almost two decades. However, for all the pressure and unilateral sanctions placed on the Iranian government by the Clinton and Bush administrations, it was only in early 2014, after the 2013 election of Hassan Rouhani as president, that Iran agreed to come to the table and negotiate over its nuclear program.

While it is difficult to know the motivations of a government as opaque as Iran's, it is likely that the economic hardship brought on by sanctions was what brought the country to the table. And, unlike the decades of sanctions before, the reason that the sanctions implemented on Iran's oil production starting in 2012 were so successful was their comprehensive, multilateral nature. The governments of the U.S., EU, Japan, the Republic of Korea, Canada, and others agreed to targeted sanctions that would reduce the amount of oil Iran could export. Although it has seldom been stated officially, the reason these countries agreed to take Iran's oil production off the global marketplace is that the surge in oil production from American shale producers could replace the lost Iranian oil in the marketplace. Although not explicit, this is probably the closest that American diplomacy has come to using its newfound energy as a "weapon."

CARIBBEAN ENERGY SECURITY INITIATIVE

On islands with few resources, virtually all energy must be imported. Because of the lack of scale, costs for infrastructure are often much higher than for mainland, continental states. In the small states of the Caribbean, outside powers have used this vulnerability to their advantage. The best current example of this is the Petrocaribe program, where Venezuela sells fuel oil at reduced costs to Caribbean nations. In some countries, like Jamaica or Haiti, these subsidies amount to around 4 percent of GDP.⁸ One of the hallmarks of Hugo Chavez's presidency, this agreement has essentially brought accession to Venezuela's preferred policies in the region. However, there are alternatives to a dirty dependence on subsidized petroleum imports-the two resources the islands have in abundance are sun and wind, making renewable energy attractive even without subsidies. The American revolution in natural gas could provide an alternative source through imports of Liquefied Natural Gas (LNG) or in fuels like propane and other liquefied petroleum (LP) gases. In the longer run, the domestic renewable resources of the islands could provide more than enough power for their energy needs. Recognizing that the upfront costs in infrastructure and technology, as well as governance issues, have held back progress, Vice President Joe Biden and the State Department have initiated a new Caribbean Energy Security Initiative that directly engages with the governments and stakeholders on each island in order to help facilitate solutions to the problems each faces. While the initiative is in its infancy, this shows a model for how the U.S. can directly engage with countries in the future.

PROSPECTS FOR FOSSIL FUEL EXPORTS

The American Energy Revolution could provide the United States with a new tool of geopolitics, if the government chooses to allow it: natural gas exports. Unlike oil, the market for natural gas is not truly global. Rather, natural gas is priced differently in different parts of the world. This is due to the nature of natural gas—it is not easily transportable.

This means that there are geopolitical opportunities presented by allowing LNG exports to move forward. Permitting new LNG export capacity in the United States will provide more liquidity to the global LNG market, provide alternative sources of energy for our allies, and accelerate the trend away from the oillinked pricing system in Asia and Europe. LNG export capacity will undermine the ability of major energy suppliers to use energy as a political weapon.

LNG exports will help American allies in two key regions—Europe and Asia—by undercutting the political clout of dominant producer states and by expanding the quantity of total energy supplied to allies starved of energy. As of February 2015, the Department of Energy has approved nine LNG export facilities, with a further twenty-nine applications under review.9 If only the approved are all built, the U.S. will have a combined export capacity of 12.2 billion cubic feet (bcf) per day, more than the consumption of any single European country (Germany, the largest consumer, averages about 8.6 bcf per day).

In the negotiations for the Transatlantic Trade and Investment Partnership (TTIP), European negotiators have asked for unfettered access to American energy exports. However, the global marketplace seems to indicate that most gas would flow from the U.S. to Asia, where prices have been almost double that of Europe.

Ironically, though, it does not matter if a single molecule of American gas reaches European shores for the geopolitical benefits of American LNG exports to accrue to importers. Because the potential supply of U.S. LNG is so vast, American exports will help create a more liquid marketplace, with deliveries based on supply and demand fundamentals, not based on monopoly rules, political connections, and extorted transit fees. In essence, buying natural gas would become more like buying oil. This would allow America's allies to diversify their energy sources, reduce the burden on their economies, and free themselves from dependence on monopoly providers countries like Russia.

CLIMATE POLICY

Ever since the negotiations leading up to the Kyoto Protocol in the 1990s, climate change was seen as a separate part of diplomacy. It was seldom talked about by the same people who handled energy, even though they are two sides of the same coin. That is increasingly changing. The 2005 G8 meeting in Gleneagles Scotland prioritized action on global warming, and was the first multilateral statement validating that humans were responsible for warming.

Today, action on climate change has returned to the international stage: it is a central part of the agenda of every major international meeting. Over the coming decades, one of the measures of a country's "soft power" is likely to be how it is perceived to be acting on climate change.

Developments in late 2014 provide an example of how climate policy is becoming a mainstream part of

diplomacy along with energy. The United States and China came to an agreement about emissions at the 2014 APEC Summit in Beijing that will commit China to peaking its emissions before 2030. Later in that same week, at the G20 meeting in Brisbane, Australia, the U.S. and other nations came together to pledge over \$10 billion to a new Green Climate Fund that will help developing nations adapt to climate change and move to low-carbon, sustainable development. Put together, these developments show how addressing climate change has become a key part of diplomatic engagement.

In 2015 and for the foreseeable future, the U.S. will be at the center of international diplomacy on climate change. With Germany chairing the June 2015 G7 summit in Schloss Elmau, Chancellor Merkel and President Obama have pledged to work closely on a commitment from the G7 to move toward a global agreement on climate change. Europe and the U.S. have a long history of both collaboration and confrontation in climate diplomacy. For now, renewed American domestic action on climate change means that Europe and the U.S. are moving in the same direction. In November 2015, leaders from around the world will converge on Paris in an attempt to forge a global agreement to effectively address climate change. Success will only follow if the world's major emitters, especially the U.S., Europe, and China, can find common ground to work together.

Conclusion: The American Bias is Toward Free Markets

America's energy revolution is also proving to be a revolution in its diplomatic engagement. While discrete decisions like licensing exports of natural gas would help America strategically, this is not really about the energy: it is about American support for free trade. Since the end of World War II, the U.S. has been the world's champion in creating a free global trading system. The U.S. is a beneficiary of the global, open trading system and it is not in its interest to restrict trade or to provide preferential or monopolistic access.

The most important thing energy can do for American diplomacy is to help build an open trading system— with U.S. energy as a part of that system. That means

the U.S. must re-engage with and complete both the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). Once a trade deal is formalized, U.S. law ensures that natural gas exports are deemed in the "national interest," allowing access to exports to all parties in these deals.

American support for free markets will inevitably bring it into conflict with monopolistic energy producers like Russia, Venezuela, and the other members of OPEC. However, if these countries embrace the discipline of free and open markets in energy, they can also benefit over the long run.

American policy will sometimes clash with allies like Germany over their relations with monopolistic energy providers. For example, few American policymakers can understand the desire of Germans to build the Nord Stream pipeline to Russia, further deepening the energy relationship with a country that has demonstrated its desire to use energy for geopolitical ends. While Americans have no doubt that Germany can protect its own interests against Russia, they are concerned that such exclusive agreements between the two major powers will allow Russia to cause trouble with more vulnerable neighbors along its borders.

It is not in the U.S. government's interest to use American energy resources as a "weapon" against any nation. In the long term, U.S. energy resources will provide a significant strategic benefit to the U.S. through American advocacy for a free and open trading system. Such a system will prove to be even more powerful than any energy "weapon" because American energy in a free global market will neuter the weapons that other countries think they have built.

Notes

1 Jeffrey Record, Japan's Decision for War in 1941: Some Enduring Lessons (Carlisle, PA: The Strategic Studies Institute, February 2009), 15 http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB905.pdf.

2 See the International Energy Efficiency Scorecard, http://www.aceee.org/portal/national-policy/international-scorecard>.

3 Richard Nixon, Address on the State of the Union Delivered Before a Joint Session of the Congress, 30 January 1974, http://www.presidency.ucsb.edu/ws/?pid=4327.

4 See, for example, the International Index of Energy Security Risk by the U.S. Chamber of Commerce's Institute for 21st Century Energy, <http://issuu.com/energyinstitute/docs/internationalindex>.

5 Jimmy Carter, The State of the Union Address Delivered Before a Joint Session of the Congress, 23 January 1980, http://www.presidency.ucsb.edu/ws/?pid=33079>.

6 Keith Crane, Andreas Goldthau, and Michael Toman, et al., *Imported Oil and U.S. National Security* (Santa Monica, CA: RAND, 2009).

7 See the data for U.S. Production of Crude Oil, <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFP US2&f=M>.

8 "Cheaper Oil: Winners and Losers," *The Economist*, 25 October 2014, <http://www.economist.com/news/international/21627642-america-and-its-friends-benefit-falling-oil-prices-its-most-strident-critics>.

9 U.S. Department of Energy, "Long Term Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States," http://energy.gov/sites/prod/

files/2015/01/f19/Summary%20of%20LNG%20Export%20Applications.p df>.