

Testimony of David L. Goldwyn, Nonresident Senior Fellow, Brookings Institution, and President, Goldwyn Global Strategies, LLC before the U.S. Senate Committee on Energy & Natural Resources

*"Importing Energy, Exporting Jobs. Can it be reversed?: How Natural Gas Exports Can Spur Manufacturing, Create Jobs and Increase U.S. Global Influence"*

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The Role of Natural Gas Exports in U.S. Foreign Policy

Madam Chairwoman and Members of the Committee, it is an honor to speak with you today about the geopolitical benefits of America's natural gas bounty. The dramatic growth in natural gas reserves and production in the United States over the past five years has resulted in economic growth, relative reductions in greenhouse gas emissions, and greater energy security. Every credible estimate of our energy future suggests we will have substantial exportable surpluses of natural gas for decades to come. This bounty could enhance our national power by positioning our nation as a reliable supplier of natural gas to regions of the world that suffer from intimidation from their suppliers or simply the economy crushing burden of oil linked prices. The question before us is not whether we have this geopolitical potential, but whether we will realize it in time to help our friends and allies.

Several reports and studies have established a consensus that the benefits of liquefied natural gas (LNG) exports from the U.S. significantly outweigh the costs. As the co-chair of the Brookings Institution Natural Gas Task Force, we explored many of the issues surrounding LNG exports. Following the completion of the Task Force sessions, my colleagues at Brookings published a well-received report that found that price impacts of LNG exports would be minimal, and that the effects of LNG export on the U.S. gross domestic product and trade balance would be positive.<sup>1</sup> The macroeconomic LNG study commissioned by the Department of Energy, prepared by NERA Economic Consulting,<sup>2</sup> found that there would be net economic benefits to the U.S. at all levels of exports modeled. Just last month, NERA released an update to that study which added several new scenarios,<sup>3</sup> once again finding that "LNG exports provide net economic benefits in all the scenarios investigated, and the greater the level of exports, the greater the benefits."<sup>4</sup>

I am here today to speak about the foreign policy benefits that LNG exports can provide. Countries enhance their national power when they act as reliable suppliers of strategic

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<sup>1</sup> Charles Ebinger, Kevin Massy, and Govinda Avasarala, "Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas," Brookings Institution, May 2012, p. xiii. (Ebinger, 2012)

<sup>2</sup> W. David Montgomery, Robert Baron, Paul Bernstein, Sugandha D. Tuladhar, Shirley Xiong and Mei Yuan, "Macroeconomic Impacts of LNG Exports from the United States," NERA Economic Consulting, December 2012.

<sup>3</sup> Robert Baron, Paul Bernstein, W. David Montgomery and Sugandha D. Tuladhar, "Updated Macroeconomic Impacts of LNG Exports from the United States," NERA Economic Consulting, February 2014.

<sup>4</sup> "NERA Releases Updated Study on Economic Impacts of LNG Exports," March 6, 2014.  
[http://www.nera.com/83\\_8451.htm](http://www.nera.com/83_8451.htm)

commodities to the global market. This power can be wielded for good, to stabilize markets and create competitive prices. It can also be used for ill, as we have seen with Russia, using its market power to intimidate its neighbors. The U.S. can be a strategic supplier to the global gas market. While our government does not dictate where that supply will go, it does control how fast we will connect to the global market. The Natural Gas Act has inadvertently put the friends and allies who need us most at the back of the line. The process for reviewing exports of LNG to countries we do not have free trade agreements with has proven to be cumbersome, and potentially out of sync with commercial realities.

The crisis in Ukraine should cause us to think anew on this process and see if we can leverage our natural gas bounty to help our allies by accelerating the consideration of export applications so that they can plan for the day when they can reduce their reliance on Russian gas or on the oil-linked prices that are crippling their economies. In addition, we should begin now to compete actively with Russia for Asia's markets before we cede that region as well to dependence on Russian supply.

While the benefits of U.S. LNG exports would be global, my remarks will focus on the impact to Europe in light of the current crisis in Ukraine. I will briefly address the implications for Asia towards the end of my testimony. My remarks today reflect an article that I published just last week at the Brookings Institution,<sup>5</sup> which I will also submit for the record.

If the U.S. were to accelerate the consideration of exports to non-FTA countries, by allowing projects that have received environmental clearance to receive expedited consideration,<sup>6</sup> or by agreeing to consider all projects with environmental clearance from the Federal Energy Regulatory Commission (FERC) within 90 days of receiving that clearance,<sup>7</sup> or more broadly by deeming exports of LNG to all countries to be in the national interest,<sup>8</sup> the energy security of import dependent countries like Japan and the nations of Central and Eastern Europe would be improved. Expectations of future supply drive energy prices and impact infrastructure investment decisions made today. While no panacea, U.S. LNG exports would have a significant impact on global markets for natural gas and the energy security of some of our closest partners and allies.

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<sup>5</sup> David L. Goldwyn, "Refreshing European Energy Security Policy: How the U.S. Can Help," Brookings Institution, March 2014 (Goldwyn, 2014)

<sup>6</sup> David L. Goldwyn, "A Modest Proposal for Improving the Department of Energy Non-FTA Liquefied Natural Gas Export Application Process," Brookings Institution, May 2013

<sup>7</sup> The Energy Policy and Conservation Act can be interpreted to require that all agencies responsible for issuing national interest determinations have a responsibility to do so within 90 days after FERC completes its review: "a final decision on a request for a Federal authorization is due no later than 90 days after the Commission issues its final environmental document, unless a schedule is otherwise authorized by Federal law." 18 C.F.R. §157.22

<sup>8</sup> Such a determination would only affect the approval of the export permit application at the Department of Energy, and would not release a company from its environmental assessment requirements before the Federal Energy Regulatory Commission (FERC)

## The U.S.'s European Energy Security Policy

Europe is in a unique position with regard to energy security. The region's energy insecurity varies greatly. The nations of Western Europe have traditionally had greater access to diverse supplies of energy resources at competitive prices, particularly natural gas, than their Central and Eastern European counterparts. This is due in part to successful Western European efforts to diversify their sources of supply after Russian gas exports through Ukraine were disrupted in 2006, and once again in 2009. Yet as Western Europe has enjoyed progress, Central and Eastern Europe remain heavily dependent on Russia for their energy supplies, with some NATO allies, like Bulgaria and Lithuania, wholly dependent on Russian gas. This situation has become starkly clear in the wake of the ongoing events in Crimea.

For many years now, the U.S. has made European energy security a top foreign policy objective. U.S. policy focused on encouraging new suppliers (such as Azerbaijan, Turkmenistan, and Iraq) to send energy to Europe, the promotion of new pipelines and infrastructure, and utilization clean energy technology and energy efficiency. The U.S. has promoted infrastructure projects, like the Baku-Tbilisi-Ceyhan and the Southern Corridor (particularly the Nabucco pipeline), with differing levels of success. We believed a more secure Europe equals a more secure U.S. Independently, Europe has, of course, taken major steps to increase its energy security- approving the Third Energy Package, making destination clauses for natural gas illegal and seeking to create integrated EU markets for electricity and natural gas.

Despite these successes, much of Europe remains energy insecure. In the wake of the crisis in Crimea, energy importing nations were left to wonder whether they would once again suffer as a result of the Russian-Ukrainian dispute, grateful that this crisis did not take place in the depth of winter when another gas shut-off could have been hugely disruptive to their economies. While Western Europe has been able to work to diversify its gas imports through LNG import terminals and agreements with other suppliers, the beneficiaries of geography and relatively strong economies, the nations of Central and Eastern Europe remain dependent on Russia.

To address its energy insecurity Europe will have to make significant strides internally towards further integrating its markets, promoting internal market reform in member countries, developing further infrastructure to support alternative gas supplies and interconnections among member countries, and encouraging indigenous gas development. The U.S. will need to recommit to its Caspian policy, to ensure that the Southern Corridor is completed and that Azerbaijan and Kazakhstan maintain their autonomy and sustain their roles as suppliers of oil and gas to Europe. Refocusing the U.S. policy towards European energy security to consider all of these topics is vital. The U.S. is already active in helping European nations develop their indigenous shale gas resources, through the Global Shale Gas Initiative (GSGI), which I started during my tenure at the U.S. Department of State, now known as the Unconventional Gas Technical Engagement Program (UGTEP), but the U.S. can do more. We can make further integration of European gas markets a key tenet of our engagement in the U.S.-EU

Energy Council, and continue to encourage the responsible development of local gas resources. Because the focus of this hearing is U.S. LNG exports, I will limit my remarks on those topics and direct you to the Brookings article submitted to the record for further information.

### How Could U.S. LNG Exports Help?

A clear signal from the U.S. that LNG exports will be available to European allies for future purchase would put immediate pressure on Russia's market share, and would also help accelerate investment in and construction of gas transportation infrastructure in Europe. Russia, through its national natural gas company Gazprom, has already found it necessary to renegotiate contracts for natural gas with Western European customers as a result of the U.S. shale gas boom. As many observers have noted, including very recently the Czech Republic's Ambassador-at-Large for Energy Security,<sup>9</sup> the U.S. shale boom resulted in the unexpected availability of LNG cargoes originally destined for the U.S., which increased gas supply to Europe and put downward pressure on prices. Exports of LNG from the U.S. could ensure that the increased negotiating power that Western Europe has had for the past few years is not diminished, and may even be able to extend that negotiating power to the Central and Eastern European nations that remain heavily dependent on Russian exports of natural gas.

A Deloitte report on the international implications of U.S. LNG exports found that even modest levels of U.S. exports, roughly six billion cubic feet per day, would result in wealth transfers from Russia to European consumers of up to four billion dollars, simply as a result of reduced contract prices and lost Russian market share.<sup>10</sup> In terms of European energy security, not to mention economic productivity, that could be considered a success.

Some respected analysts have been too quick to dismiss the connection between U.S. LNG exports and increased European energy security. In dismissing that connection, they make four mistakes: "... 1) assuming most U.S. LNG exports will go to Asia, 2) assuming the post 2016 delivery time for U.S. LNG will not impact price formation today, 3) underestimating the importance of securing Henry Hub based LNG supply for financing European infrastructure projects and 4) failing to see the immediate strategic importance of degrading Russia's future share of the European gas market."<sup>11</sup>

#### *1) LNG exports to Europe*

A number of skeptics have questioned whether Europe would receive any LNG exports from the U.S., arguing that higher priced markets in Asia are more likely to win the cargoes. This view is simplistic. While it is true that gas prices remain higher in Asia than in Europe today, European gas prices remain approximately twice as high as Henry Hub prices. Indeed, European buyers, including Central and Eastern European consumers,

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<sup>9</sup> Remarks of Czech Republic Ambassador-at-Large for Energy Security Vaclav Bartuska, Atlantic Council of the United States Conference Call, "Crisis in Ukraine: The Energy Factor," March 17, 2014.

<sup>10</sup> "Exporting the American Renaissance: Global impacts of LNG exports from the United States," Deloitte Center for Energy Solutions and Deloitte MarketPoint, 2013.

<sup>11</sup> Goldwyn, 2014

have contracts with high-priced suppliers like Russia and Qatar that they are currently seeking to renegotiate. In the event that Russia cuts off supply to Western Europe, European prices could easily approach Asian pricing levels. Asian demand may prove to be weaker than expected in the short to medium term, as a result of nuclear capacity coming back online, and those consumers are also seeking to erode oil-linked pricing. “Meanwhile, the governments of CEE nations are using diplomatic channels to make it clear that they see imports of U.S. gas to be a vital component of their energy diversification strategies.<sup>12</sup> Purchasers weigh price heavily of course, but they also weigh the diversity of supply source, and the likelihood of timely project completion.”<sup>13,14</sup>

## 2) *Price Formation*

As stated previously, long-term gas supply prices are formed based on future price and supply expectations. Energy is a business where the marginal barrel (or cargo) sets the price, and the lead times for project development can be long. Every decision, from investments in oil and gas to production to power generation infrastructure to the construction of LNG import or export terminals, is based on future price expectations. Allowing US based LNG to compete for market share in Europe could decrease Russia’s future market share in Europe, and ensure that the gas that they do provide is competitively priced. The availability of alternative supply is central to the continent’s energy security, and the availability of American LNG supplies may be the only direct tool that the U.S. has to achieve that goal.

## 3) *Financing New Infrastructure*

It is true that commercial parties, rather than governments, make final investment decisions about infrastructure development in Western nations. However, commercial energy infrastructure projects are difficult to develop without access to reliable, competitively priced sources of supply. The availability of U.S. LNG supply at prices that are competitive against piped Russian gas or oil-linked Qatar gas will make it easier to develop much-needed infrastructure projects in Europe.

## 4) *Degrading Russia’s Market Share*

Disregarding the benefits of U.S. LNG exports simply because they won’t be available until 2016 or beyond is short sighted, at best. Energy consumers are looking for natural gas supplies to purchase in the future, because they have generally already contracted long-term supply through 2016 or so. The U.S. policy regarding European energy security has been predicated on the pursuit of long-term projects that would ensure supply diversity. The Southern Corridor will not be in place till 2018. Potential supplies from East Africa will not enter the market until after 2020. Our litmus test (and time

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<sup>12</sup> Multiple nations have been vocal about their desire to import U.S. LNG. The Ambassadors of the Visegrad 4 nations (Poland, the Czech Republic, Hungary and Slovakia) sent a letter to Congressional Leadership asking them to remove the bureaucratic hurdles surrounding export permits; meanwhile plans are in the works to create a lobbying group named “LNG Allies,” which will represent a larger group of countries and lobby the U.S. government in favor of LNG exports. (Amy Harder, “Europe to America: We Want Your Gas,” *National Journal*, January 16, 2014; Veronika Gulyas, “Central Europe Turns to U.S. for Natural Gas,” *Wall Street Journal*, March 10, 2014)

<sup>13</sup> While LNG projects are being developed globally, many of the projects abroad have suffered from major delays and cost overruns, including some of the large-scale projects under development in Australia and the South Pacific. (Ed Crooks, “Cost of Australia’s Gorgon LNG project rises to \$54bn,” *Financial Times*, December 12, 2013)

<sup>14</sup> Goldwyn, 2014

horizon) for assisting European consumers dependent on Russian gas supply should be forward-looking, extending far beyond how we help them next week.

### The LNG Approval Process: A Source of Uncertainty

Today, companies seeking to export LNG from the U.S. are required to seek a national interest determination from the U.S. Department of Energy. Applications to export LNG to countries that the U.S. has free trade agreements (FTA) with are automatically determined to be in the national interest, in accordance with Section 3 of the Natural Gas Act.<sup>15</sup> Applications for exports to non-FTA nations, on the other hand, go through a longer national interest determination process, in which the Department of Energy considers the applications on a case-by-case basis, assessing the cumulative impacts of LNG exports. The uncertainty that results from this process is a result of the opaqueness of the process and there is no clear timeline for the approval or denial of projects. This uncertainty makes it difficult for potential suppliers of U.S. LNG to secure financing for their projects and for consumers abroad to accurately assess and compare potential suppliers when they seek to sign contracts.

The U.S. could minimize this uncertainty by deeming exports of natural gas to be in the national interest, regardless of whether their destination is to FTA or non-FTA nations. This would allow the market to decide whether supplies will go to Europe or Asia. While this might be the economically optimal approach, it has obvious political challenges and the Department of Energy has other choices. One would be to grant early preference to the countries of Central and Eastern Europe and Japan, which would allow projects with those customers to enjoy a financing advantage and accelerated consideration. This will help countries most in need but picks winners in a way that could invite trade based challenges. A process-based improvement would be to allow commercially mature projects (those with contracts and which have obtained FERC environmental clearance) to be considered promptly by DOE, either by jumping to the head of the queue or by agreeing to consider them within 90 days of obtaining FERC approval. There are multiple options available; the U.S. should choose an option that will signal certainty that U.S.-based LNG can be available to the market sooner rather than later. These regulations were developed in an era where today's abundance of natural gas could not be predicted or expected, and, as a result, bear reconsideration.

### The Impact on Asia

Removing uncertainty from the LNG permitting process would also benefit Asian consumers, and assist the U.S. as it refocuses a larger share of diplomatic attention to Asian partners and allies. Natural gas consumers in Asia pay extraordinarily high prices to secure LNG supplies, and are actively seeking new supplies abroad. As U.S. natural gas prices hover around \$4.50/mmBtu, Asian LNG benchmarks have at times exceeded \$20.00/mmBtu this year.<sup>16</sup> Henry Hub-linked U.S. LNG contracts should thus prove highly competitive in Asia even when one factors in liquefaction, transportation, and

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<sup>15</sup> 15 USC §717b

<sup>16</sup> Eric Yep, "Spot LNG Prices Hit Record in Asia," *Wall Street Journal*, February 14, 2013

regasification costs, which are widely anticipated to be around \$6-\$8/mmBtu. Henry Hub-linked contracts will provide Asian buyers, including U.S. allies and top global LNG importers South Korea and Japan, with increased negotiating leverage and pricing flexibility. This may prove especially crucial to Japan, which is suffering from record trade deficits stemming from increased LNG purchases following the 2011 Fukushima Daiichi nuclear disaster.

Other nations are also seeking to develop LNG export capabilities, some of them closer to Asia geographically. Yet many of these projects have been plagued by unanticipated cost overruns, while others are located in areas where scarce infrastructure and government corruption and rent seeking threaten to delay export timetables. Consumers in Asia have the same commercial concerns as consumers elsewhere in the world, and they value competitive costs, reliability and timeliness. The U.S. is known worldwide as a reliable trading partner, and it can play that role for Asia as well. Exports of LNG to Asia would be in the U.S.'s economic and strategic interests. Given recent events, it is worth mentioning that Russia aspires to double its share of the global LNG trade by 2020 in large part by meeting large shares of Asian demand growth. Russia is seeking closer relationships with Asian consumers like Japan and is negotiating a gas pipeline deal with China that would provide almost 40 bcm per year to China for 30 years and cost roughly \$50 billion<sup>17</sup> – but not until after 2018. We need to ask ourselves if we would prefer for Asia to plan to rely on Russian gas or on U.S. LNG as it builds its strategic alliances. As in Europe, U.S. LNG exports may one of the few direct tools the U.S. possesses to limit Russian market share and better ensure the Russian gas that is exported to Asia is done so at competitive prices.

### Conclusion

U.S. LNG exports, while no panacea, provide the U.S. with a strategic advantage for achieving greater global energy security and greater stability in natural gas markets. My colleagues at Brookings concluded in 2012 that the optimal policy regarding LNG exports from the U.S. would be to allow the market to decide where exports should go and at what volume, without promoting or restricting them.<sup>18</sup> I share that view, and believe that significantly speeding up the national interest determination process at the Department of Energy would allow the market to work more efficiently. Unfortunately, that optimal policy arrangement is unavailable to us today.

As General Martin Dempsey, Chairman of the Joint Chiefs of Staff, observed in a House Committee on Appropriations hearing less than two weeks ago, "an energy-independent and net-exporter of energy as a nation [*sic*] has the potential to change the security environment around the world, notably in Europe and in the Middle East. And so, as we look at our strategies for the future, I think we've got to pay more and particular attention to energy as an instrument of national power."<sup>19</sup> A number of influential observers in

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<sup>17</sup> Jack Farchy, "Russia looks to sell energy beyond Europe," *Financial Times*, March 20, 2014

<sup>18</sup> Ebinger, 2012

<sup>19</sup> "A Gas Export Strategy: Opponents don't understand energy markets or price expectations." *Wall Street Journal*, March 19, 2014.

Washington and beyond, from both sides of the partisan aisle, concur that LNG exports are in the interest of the U.S., and have weighed in in favor of exports as a tool for reducing Russia's dominance in European energy markets. Several pieces of bipartisan legislation have been introduced in both Chambers of the Congress that would authorize exports of U.S. LNG to our allies, be they NATO or WTO members.

The geopolitical imperative is clear. The Russian dominance of European energy markets and the predominance of high-cost oil-linked gas prices in both Europe and Asia threaten the energy security of our friends and allies, and of the U.S. by extension. In an increasingly globalized world, an insular policy regarding LNG exports is not in the interest of the U.S. The U.S. consistently supports opening markets throughout the world to create new opportunities and shared prosperity with our allies and partners. Our broader policies and goals are at odds with current restrictions on both LNG and crude oil exports, and this inconsistency does not go unnoticed by negotiating partners. These policies, which were developed during an era of energy scarcity, merit reconsideration given our current energy abundance. In the absence of the optimal policy arrangement, in which LNG exports would be free to flow as directed by the market, we should consider unfettering LNG exports to our friends and allies in Europe as a first step.

I close today as I closed my article for Brookings:

We have spent nearly two decades of intense diplomacy trying to diversify Europe's energy supply by getting Azerbaijan, Kazakhstan, Turkmenistan and even Iraq to sell them energy. Baku-Tbilisi-Ceyhan. Nabucco. The Southern Corridor. The Trans-Caspian Gas Pipeline. We finally have a tool at our disposal that can provide direct relief to Europe over time, and accelerate the competitiveness of that market today. We want everyone else to help. Shouldn't we?<sup>20</sup>

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<sup>20</sup> Goldwyn, 2014