

**TESTIMONY OF MARTIN J. DURBIN, PRESIDENT AND CEO,
AMERICA'S NATURAL GAS ALLIANCE**

SENATE ENERGY & NATURAL RESOURCES COMMITTEE

January 29, 2015

Introduction

Good morning, Chairman Murkowski, Ranking Member Cantwell and Members of the Committee. Thank you for the opportunity to testify today. My name is Marty Durbin. I am President and Chief Executive Officer of America's Natural Gas Alliance ("ANGA").

ANGA represents North America's leading independent natural gas exploration and production companies. We work with industry, government and customer stakeholders to increase demand for, and ensure availability of, our nation's natural gas resources for a cleaner and more secure energy future. The collective natural gas production of ANGA member companies is approximately eight trillion cubic feet annually, which represents one third of total U.S. production.

The subject of today's legislative hearing, S. 33, *The LNG Permitting Certainty and Transparency Act*, is important and timely as our nation's energy outlook continues to transform due to the increased production and use of natural gas. First, I want to thank Senators Barrasso and Heinrich and the bipartisan cosponsors of S. 33 for their continued commitment to ensure America's competitive advantage in energy markets. ANGA strongly supports S. 33 as a way to help our nation establish a significant natural gas export policy while strengthening our economy and supporting our strategic alliances abroad.

The United States is now the leading natural gas producer in the world. And, we have an abundant supply of this affordable, reliable resource that will enable us to power our nation for generations to come. A robust natural gas export policy will help grow our economy, support our manufacturing sector, strengthen our national security interests and protect our environment. For these reasons, we urge the Senate to approve S. 33, *The LNG Permitting Certainty and Transparency Act*.

The LNG Permitting Certainty and Transparency Act (S. 33)

Pursuant to Section 3 of the Natural Gas Act, the Federal Energy Regulatory Commission (FERC) is responsible for authorizing the siting and construction of onshore and near-shore LNG import or export facilities. Additionally, the FERC has statutory authority with respect to the interstate transportation of natural gas by pipeline, as well as requirements under the National Environmental Policy Act (NEPA) regarding environmental review of proposed facilities.¹ The FERC process is extensive, predictable, requires a significant amount of resources and investment on the part of an applicant and provides meaningful opportunity for public comment and input.

¹ Natural Gas Act, 15 U.S.C. § 717b (2015),
<http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011usc15.pdf>.

For applications to export natural gas to non-Free Trade Agreement (FTA) countries, the Natural Gas Act directs the Department of Energy (DOE) to grant export authorization unless the DOE finds that the proposed exports “will not be consistent with the public interest.”² The DOE process for issuing a public interest determination has not been as predictable.

By requiring the Secretary of Energy to issue its public interest determination within 45 days after the conclusion of the NEPA review by the FERC, S. 33 provides this clarity and timeliness. Applicants will be better able to estimate their costs, construction timelines, and labor needs. And, these multi-billion dollar investments will be more likely to progress toward construction and operation. S. 33 also provides for expedited judicial review in the U.S. Circuit Court of Appeals where the terminal in question is located, providing additional predictability.

ANGA appreciates DOE’s efforts to improve the LNG export permitting procedures by instituting changes in August 2014.³ This legislation takes the next step by providing needed certainty to remaining applicants. Half of the applications awaiting DOE approval to export to non-FTA countries applied in 2012 or earlier.⁴ S. 33 will expedite the process by reducing the period of time between successful completion of the FERC review and receipt of final DOE approval. Figure 1 shows that those terminals which have received FERC approval all applied to DOE three to five years ago. The two far right columns show that the terminals with final DOE approval took an average of 106 days from the time they were approved at FERC to the time they were given final approval at DOE. S. 33 will help expedite the process and provide DOE with clear direction.

Figure 1: DOE Approval Timeline

Terminal	Applied to DOE	Final Approval at FERC	Final Approval at DOE	Days between FERC and DOE Approvals
Sabine Pass	7-Sep-10	16-Apr-12	7-Aug-12	113
Freeport LNG	17-Dec-10	30-Jul-14	20-Nov-14	113
Carib Energy	20-Oct-11	N/A	20-Sep-14	N/A
Cameron LNG	21-Dec-11	19-Jun-14	16-Sep-14	89
Cove Point	3-Oct-11	30-Sep-14	Still waiting	121 and counting
Corpus Christi	31-Aug-12	20-Dec-14	Still waiting	40 and counting

Source: DOE & FERC

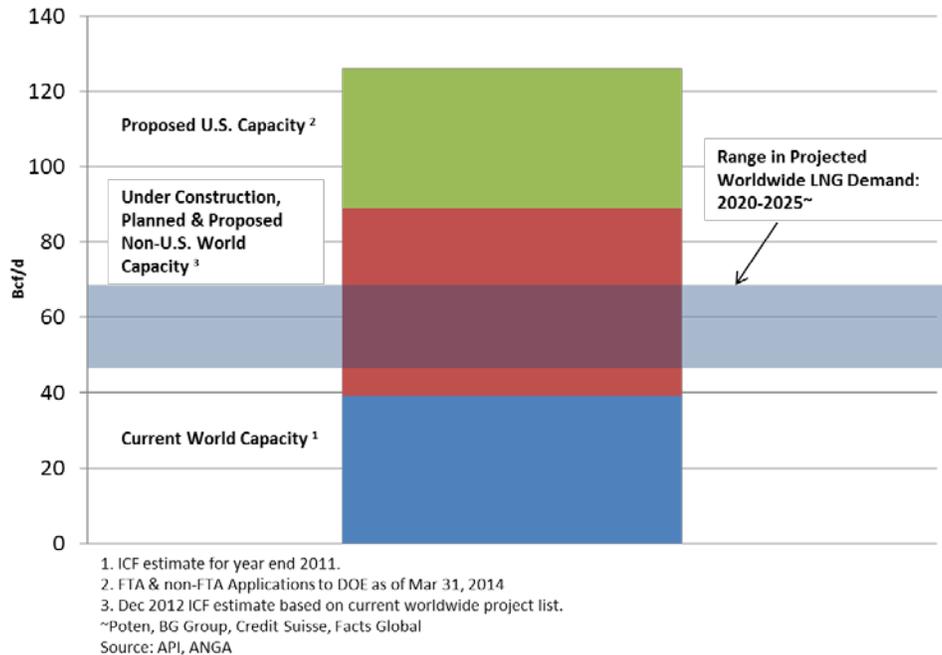
² Ibid.

³ Department of Energy, “Procedures for Liquefied Natural Gas Export Decisions,” *Federal Register* 79 (2014): http://energy.gov/sites/prod/files/2014/08/f18/FR%20Procedures%20LNG%20Exports%2008_15_14.pdf.

⁴ “Long Term Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States,” last modified December 15, 2014, http://energy.gov/sites/prod/files/2014/12/f19/Summary%20of%20LNG%20Export%20Applications_1.pdf.

The certainty provided by this legislation will allow the US to enter the global LNG markets more quickly. Global demand for natural gas is expected to increase between 18 billion cubic feet per day (bcf/d) and 38 bcf/d by 2025. Proposed new global LNG capacity outside the United States is approximately 50 bcf/d. Given the disparity between projected demand and the number of facilities being proposed worldwide, the window of opportunity for the U.S. is narrow (Figure 2). LNG facilities cost billions of dollars and take several years to construct. Unless we act quickly to provide a greater level of certainty in the LNG approval process, we will miss this opportunity to become an integral player in international markets.

Figure 2: Global LNG Export Capacity and Demand

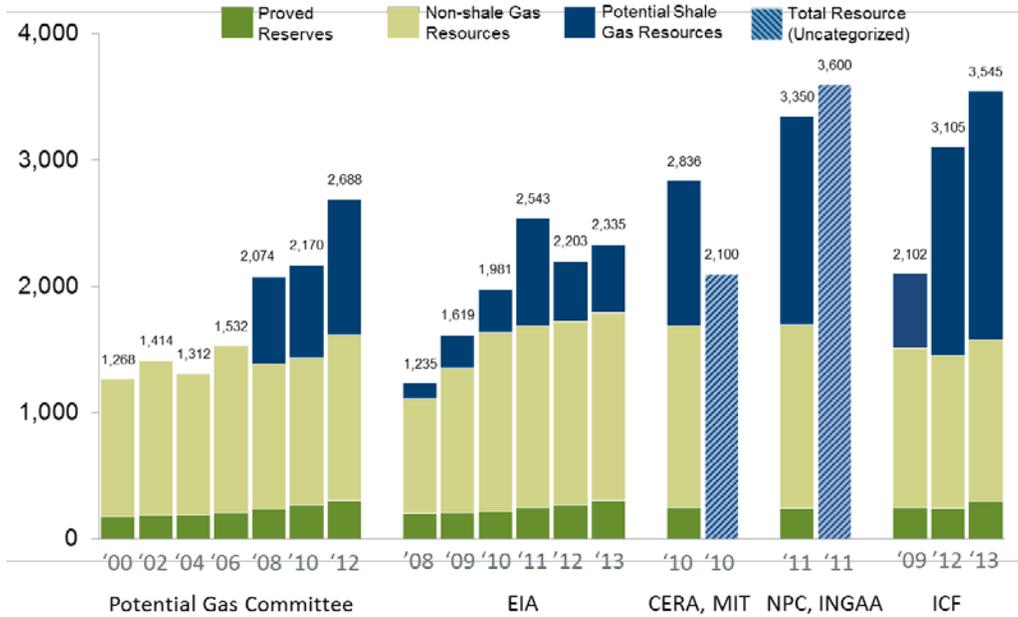


Natural Gas Supply

The United States is now the world’s leading producer of natural gas and both our production levels and reserve projections continue to increase. To put our resources in context, the volume of natural gas consumed in 2013 in the U.S. was 26 trillion cubic feet.⁵ The most recent projections show a range of technically recoverable gas using today’s technology from 2,203 to 3,545 trillion cubic feet (Figure 3). As technology continues to advance in unconventional drilling, reserve estimates continue to grow. Therefore, estimates from across a wide range of public and private sector sources make clear that the United States has enough natural gas at reasonable prices to sustain substantial increases in domestic consumption and to support significant levels of exports. We can be a global energy leader without sacrificing our domestic advantage and we should seize this opportunity.

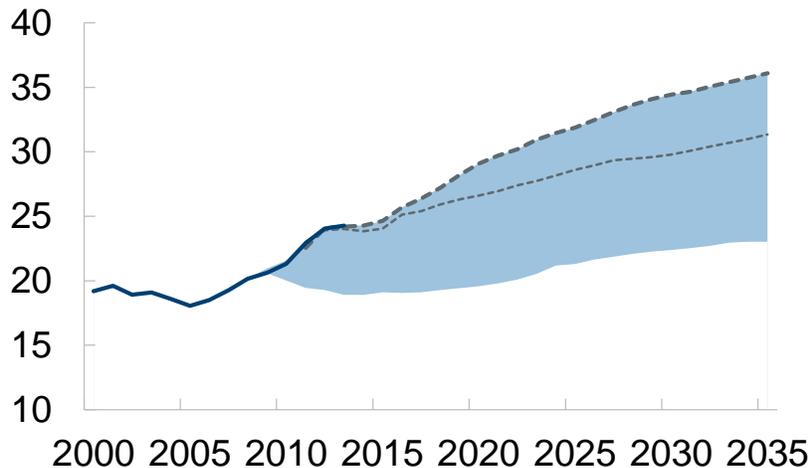
⁵ U.S. Energy Information Administration, “Natural Gas Consumption by End Use,” December 2014.

Figure 3: Technically Recoverable Reserves
Estimates of U.S. Recoverable Natural Gas
 (trillion cubic feet)



Since the beginning of 2005, natural gas production in the United States has increased 30 percent. Energy Information Administration (EIA)'s 2014 Annual Energy Outlook projects a 56 percent increase in total natural gas production from 2012 to 2040.⁶ Figure 4 shows that the most recent projection is 47 percent higher than the projection from 2009 and 10 percent higher than just one year earlier.

Figure 4: U.S. Natural Gas Production
Natural Gas Production (TCF): Reference



⁶ EIA, "Annual Energy Outlook 2014." May, 2014.

This abundant, affordable supply is sufficient to support significant demand growth across all sectors of the economy including power generation, manufacturing, transportation and exports. In fact, increased demand from LNG exports will be supported mainly through increased natural gas production.⁷ Therefore, the relevant question is not will prices increase due to this growth, rather how much will demand grow to take advantage of this abundant, affordable resource.

Securing the Benefits of LNG Exports

The U.S. has an unprecedented opportunity to be a world leader in setting and driving global energy policy. Just as the trade of any commodity promotes domestic jobs and economic growth, so too will the trade of natural gas. Expanding demand for U.S. natural gas in international markets through LNG exports will result in increased investment, enhanced GDP growth, rising incomes, and more jobs – just as the case has been with increasing exports in other U.S. industries, including those that utilize natural gas.⁸ Moreover, U.S. LNG exports will expand global natural gas markets, enhancing U.S. influence to encourage transparency, fair market rules, and strengthen relationships with our allies.

Economic Benefits

A study by ICF International found that LNG exports will contribute up to 665,000 net job gains nationwide and up to \$115 billion net gross domestic product (GDP) added to the U.S. economy by 2035.⁹ Additionally, according to the NERA Economic Consulting which conducted a study on the macroeconomic impacts of LNG exports at the request of DOE, "LNG exports provide net economic benefits in all the scenarios investigated, and the greater the level of exports, the greater the benefits."¹⁰

Additionally, studies across a broad range of private and public sector exports serve to alleviate concerns raised by some regarding the potential price impacts of natural gas with an expanded level of exports. Due to our vast levels of available natural gas resources, the incremental demand from LNG exports is projected to result in only small price impacts.¹¹ In fact, when looking across studies that specifically project domestic price impacts from U.S. LNG exports, the magnitude of these impacts have decreased over time as the reality of U.S. supply abundance and availability has materialized (Figure 5).¹²

⁷ U.S. Energy Information Administration, "Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets," October 2014, 12, <http://www.eia.gov/analysis/requests/fe/pdf/lng.pdf>.

⁸ Raymond J. Keating, "Benefits of Natural Gas Production and Exports for U.S. Small Businesses: Nationally and Key States," *Small Business & Entrepreneurship Council*, November 2014, 2, <http://www.sbecouncil.org/wp-content/uploads/2014/11/BenefitsofNaturalGasSBECouncil.pdf>.

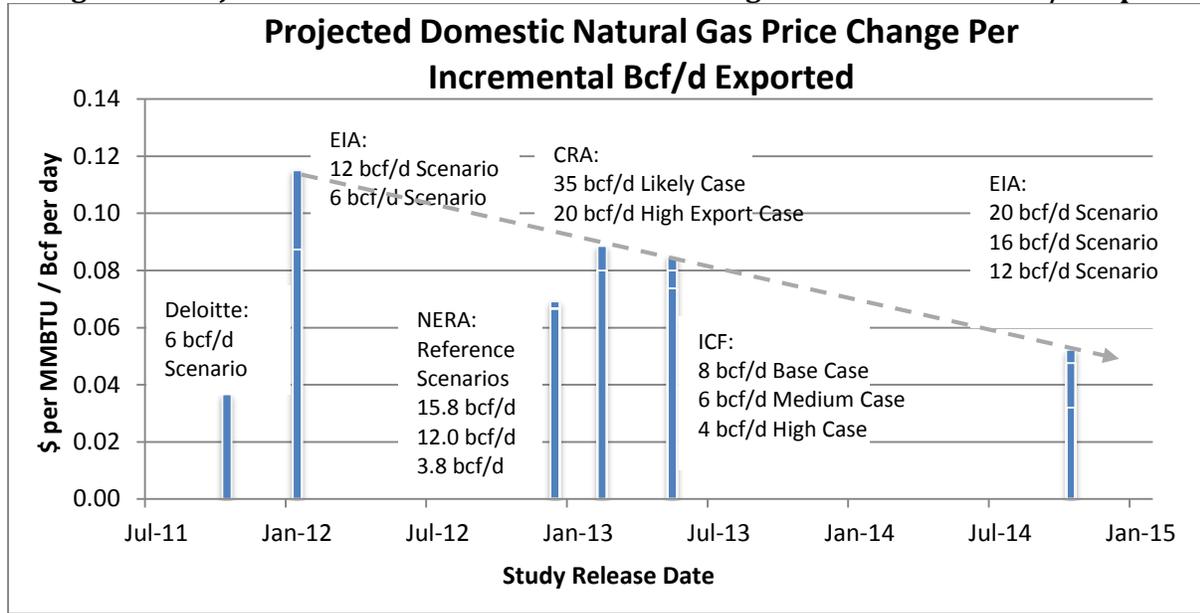
⁹ ICF International, "U.S. LNG Exports: State-Level Impacts on Energy Markets and the Economy," Nov. 13, 2013, Key Findings.

¹⁰ NERA Economic Consulting, "Macroeconomic Impacts of LNG Exports from the United States," Dec. 2012, 1.

¹¹ *Ibid.*, 2.

¹² *Ibid.*, 1.

Figure 5: Projected Domestic Natural Gas Price Change Per Incremental Bcf/d Exported



The EIA released its LNG export study examining export levels between 12 and 20 bcf/d in October 2014.¹³ As found in the NERA study cited above, higher exports lead to higher levels of economic output for the U.S. This further confirms that increased energy exports will result in increased energy production, which spurs investment and economic growth.¹⁴

Benefits to the Manufacturing Sector

Increased production of natural gas leads to an increase in natural gas liquids (NGL), elements found in natural gas, which are used as petrochemical feedstocks. Because dry natural gas and NGLs are co-products, an increase in dry gas production will result in an increase in NGL production. A new demand outlet for dry gas, such as LNG exports, encourages continued investment in overall production. Therefore, through LNG exports we can further this substantial increase in NGL supply. This natural gas and NGL abundance is driving an unprecedented resurgence in our nation’s petrochemical and energy-intensive industries.¹⁵ ICF examined the impacts of LNG exports and found that natural gas liquid volumes would increase between 138,000 and 555,000 barrels per day (bpd) by 2035 due to LNG exports.¹⁶ An increase in NGL supply helps to preserve affordable NGL prices and this benefits domestic manufacturing industries.

Increased natural gas production has already resulted in significant increases in U.S. natural gas liquids (NGL) production. In fact, the American Chemistry Council reports that:

[a]s of this week, 220 chemical industry projects valued at \$137 billion in potential investment have been announced. These projects – new factories, expansions, and process changes to increase capacity – could lead to more than \$90 billion per year in new chemical industry output and over 700,000 permanent new jobs across the economy over the next two

¹³ As requested by DOE Office of Fossil Energy, May 2014.

¹⁴ U.S. Energy Information Administration, “Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets,” October 2014.

¹⁵ Dry natural gas and NGLs are both used as energy in industrial processes as well as feedstocks to create value added products. For example, NGLs are the primary feedstock for chemicals and plastics manufacturing.

¹⁶ ICF International, “U.S. LNG Exports: Impacts on Energy Markets and the Economy.” May, 2013. pg. 7.

decades. An additional 275,000 temporary jobs will be created during the capital investment phase, which peaks in 2017.¹⁷

The resurgence in domestic industrial growth will strengthen the U.S. economy and provide an opportunity to reduce CO₂ globally. This global CO₂ reduction is possible because the energy consumed in U.S. manufacturing is less carbon intensive than other manufacturing areas throughout the world. For example, while the U.S. electric sector had an average carbon intensity of 1,109 lb CO₂/MWh in 2011, the electric sectors in China, India and the Middle East had average carbon intensities of 1,684 lb CO₂/MWh, 1,887 lb CO₂/MWh and 1,493 lb CO₂/MWh respectively.¹⁸ LNG exports allow the U.S. to both reduce emissions globally and continue to support our domestic manufacturing renaissance.

Environmental Benefits

In 2012 U.S. carbon dioxide emissions were at their lowest level since 1994.¹⁹ The principal reason for this decline is the increased use of natural gas by power generators (Figure 6). Natural gas is the cleanest burning fossil fuel. In fact, natural gas will continue to play a critical role in helping the Administration reach its climate goals. Energy Secretary Ernest Moniz notes that, “natural gas will play a crucial role in enabling very substantial reductions in carbon emissions”.²⁰ Just as essential as its role in reducing carbon emissions, greater natural gas production and use lowered emissions of pollutants such as mercury, sulfur dioxide, nitrogen oxide, and particulate matter.²¹ According to EPA Administrator Gina McCarthy, “natural gas in the U.S. has been a game changer.... [i]t’s been a significant benefit to the United States. It’s been a significant benefit to air quality.”²²

Exporting U.S. LNG will also help reduce global greenhouse gas emissions (GHG). ICF International estimates that exported LNG will have GHG emissions 43 to 52 percent lower than the dominant fuel.²³ Further, DOE’s study titled, “Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States” concluded that U.S. natural gas consumed in Europe or Asia has lower life cycle GHG emissions than power generation from locally sourced fossil fuels.²⁴ Encouraging the use of natural gas around the world can reduce emissions both at home and abroad.

¹⁷ “From Chemistry to Energy,” American Chemistry Council, accessed January 24, 2015, <http://chemistrytoenergy.com/shale-125-billion>.

¹⁸ International Energy Agency, “CO₂ Emissions from Fuel Combustion,” 2013, <http://www.iea.org/publications/freepublications/publication/co2emissionsfromfuelcombustionhighlights2013.pdf>.

¹⁹ U.S. Energy Information Administration, “U.S. Energy-Related Carbon Dioxide Emissions, 2013,” October 21, 2013, 1.

²⁰ Steven Mufson, “Ernest Moniz, MIT physicist, nominated as energy secretary,” *Washington Post*, March 4, 2013, accessed January 26, 2015, http://www.washingtonpost.com/business/economy/ernest-moniz-mit-physicist-is-to-be-nominated-as-energy-secretary/2013/03/04/e3fe68aa-808c-11e2-a350-49866afab584_story.html.

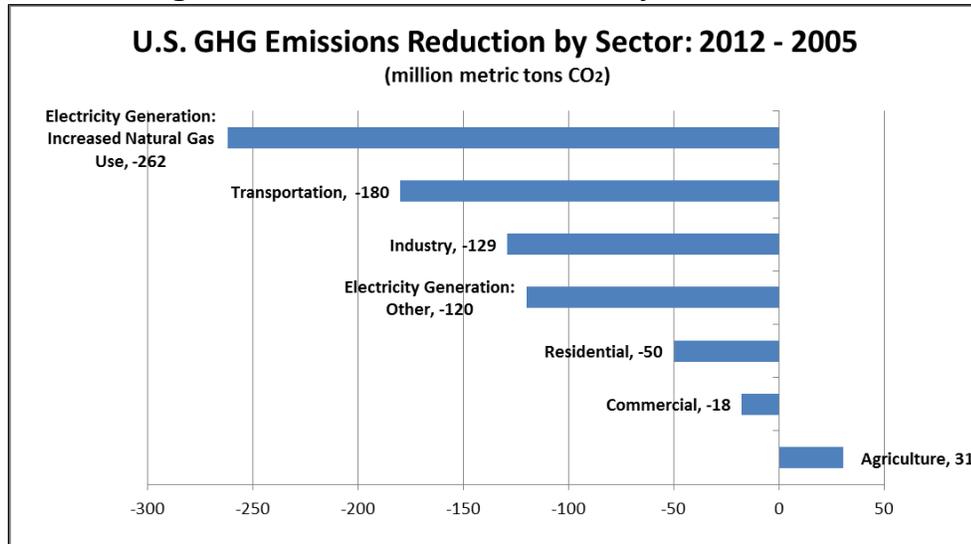
²¹ EPA, “Air Markets Program Data,” accessed January 22, 2014, <http://ampd.epa.gov/ampd/>.

²² Jeff McMahan, “EPA Administrator Gina McCarthy Defends Natural Gas,” *Forbes*, September 25, 2014, accessed January 26, 2015, <http://www.forbes.com/sites/jeffmcmahan/2014/09/25/mccarthy-defends-natural-gas/>.

²³ ICF International, “Lifecycle GHG Emissions from LNG Exports,” February 2014, 1.

²⁴ U.S. Department of Energy, “Life Cycle Greenhouse Gas perspective on Exporting Liquefied Natural Gas from the United States,” May 29, 2014, 9.

Figure 6: GHG Emission Reductions by Sector



Source: EIA 2014, EPA 2014

International Benefits

A strong natural gas exports policy will offer supply diversity to our strategic international allies. In testimony before the Senate Committee on Foreign Relations in July 2014, David Goldwyn, nonresident senior fellow with the Energy Security & Climate Initiative at the Brookings Institution, noted that:

[f]rom a geopolitical perspective, increased LNG exports from the U.S. and its allies would shift rents away from traditional, autocratic suppliers, including Russia, that have used the proceeds to finance policies at odds with U.S. national security interests. U.S. supply also promotes price competition and stability in global oil and gas markets. Price stability benefits U.S. economic growth, and also better ensures that U.S. adversaries that are major oil and gas exporters are less able to enjoy higher export revenues stemming from major global supply disruptions.²⁵

For example, the promise of U.S. LNG exports in the near term has reportedly provided greater leverage to countries negotiating new contracts with existing suppliers, including Russia.²⁶ Allowing U.S. Henry Hub indexed exports will help sustain lower pricing over the long-term and provide an alternative to oil-linked gas contracts. While U.S. exports will not be available immediately, a commitment to a strong U.S. natural gas export policy will send a powerful signal that the U.S. is dedicated to supporting the energy security of its strategic allies.²⁷ In short, LNG exports from the U.S. will help prevent geopolitically induced supply disruptions.²⁸

²⁵ David L. Goldwyn, “The Harmonization of U.S. National Security & Climate Goals,” Testimony before the U.S. Senate Committee on Foreign Relations (July 22, 2014), <http://www.brookings.edu/research/testimony/2014/07/22-us-energy-climate-security-goldwyn>.

²⁶ The following countries have LNG import terminals under construction or proposed: France, Lithuania, Poland, Spain, Croatia, Estonia, Italy, Romania, and Ukraine.

²⁷ Cheniere’s Sabine Pass Terminal is expected to have its first liquefaction train in-service by the 4th quarter of 2015.

²⁸ David L. Goldwyn, “Refreshing European Energy Security Policy: How the U.S. Can Help,” Brookings Institution (2014). Pg. 1.

A recent IHS study found that:

[T]he U.S. trade position will continue to improve, owing to the significant reduction in energy imports and the increased global competitiveness of U.S.-based energy-intensive industries[...] the trade deficit will be reduced by more than \$164 billion in 2020—equivalent to one-third of the current U.S. trade deficit.²⁹

It is vital that our export and trade policies best position the U.S. to realize the domestic economic, environmental, and geopolitical benefits associated with both U.S. LNG exports and the increased export of U.S. manufactured goods. While legislation such as S. 33 will instill greater confidence in our licensing and permitting processes, ANGA also encourages Congress and the Administration to help fully realize the geopolitical benefits of LNG exports by ensuring trade negotiations through fast-track trade promotion authority (TPA).

A New Opportunity

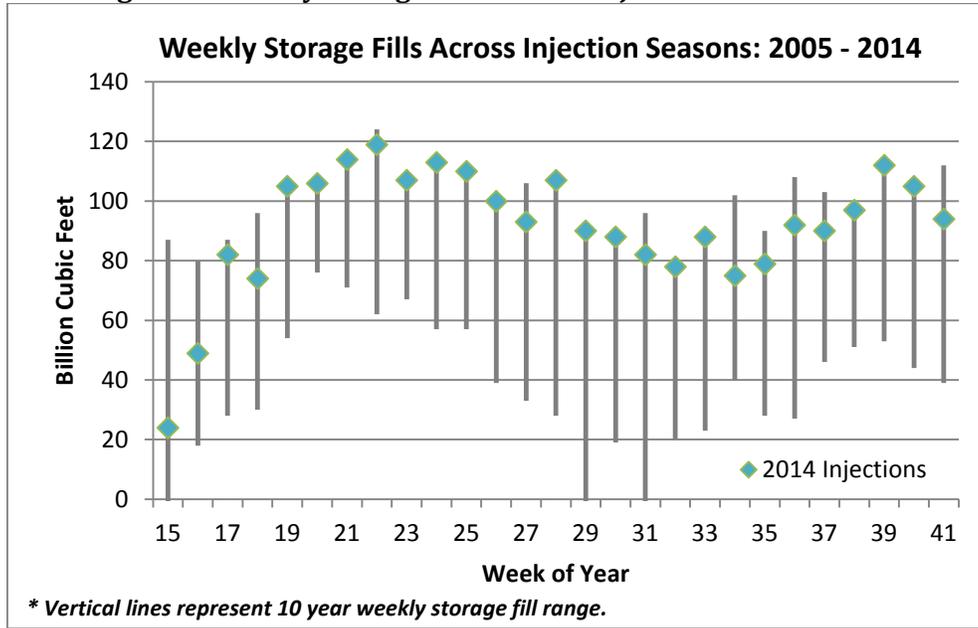
Over the past decade, the shale gas revolution has significantly improved our nation's energy outlook. Through technological breakthroughs in horizontal drilling and hydraulic fracturing, the oil and gas industry has the ability to access our nation's vast natural gas resources in an increasingly efficient and productive manner. The Energy Information Administration (EIA), the Potential Gas Committee, and MIT all project a dramatic increase in domestic supplies of natural gas to power our nation for generations. U.S. natural gas is an abundant, affordable and reliable resource and it is imperative that we take full advantage of the opportunity that this supply picture presents.

Today, we are facing a significantly different energy outlook than just a few years ago. Supply is abundant and we now have the opportunity to grow existing markets and create new ones to take advantage of this domestic abundance. The supply-side strength and resiliency of the natural gas industry that will enable us to expand markets was displayed last winter during the coldest period in a generation. These extreme weather conditions presented challenges in certain segments to our energy delivery systems. However, domestic production of natural gas withstood this challenge. In fact, at the end of last year's heating season, as many were concerned that natural gas supplies would not keep pace with demand due to the low level of natural gas in storage, producers responded with increased production making record weekly storage fills throughout the injection season (Figure 7). Natural gas production in 2014 was five percent higher than 2013, thus when combined with storage we had more natural gas at the beginning of this winter than last winter; a testament to the abundance of our supplies and the strength of our industry to respond to growing demand for natural gas.³⁰

²⁹ IHS, "America's New Energy Future: The Unconventional Oil and Gas Revolution and the Economy – Volume 3: A Manufacturing Renaissance, (2013), <http://press.ihs.com/press-release/economics/us-unconventional-oil-and-gas-revolution-increase-disposable-income-more-270>.

³⁰ U.S. Energy Information Administration, "Short-Term Energy Outlook," January 2013, 8.

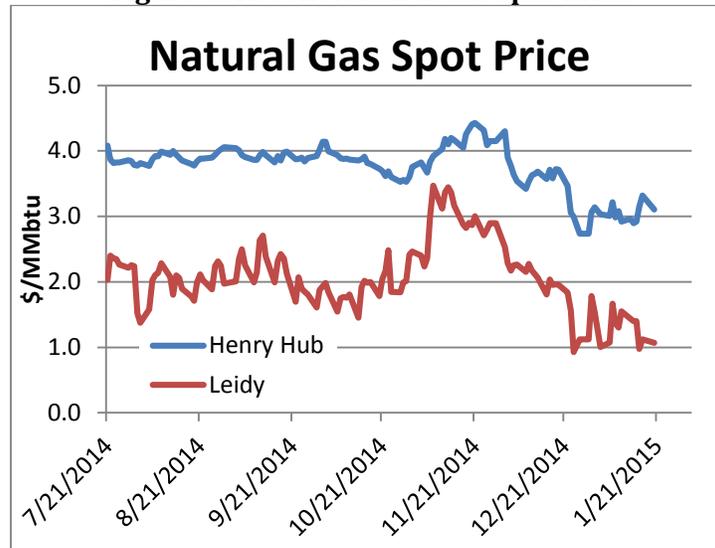
Figure 7: Weekly Storage Fills Across Injection Seasons: 2005 - 2014



Source: EIA Storage Data, ANGA Analysis

And evidence continues to mount. Now in a more normal winter weather pattern, our significant storage and increased production have resulted in an oversupplied market. We are in the middle of winter and Henry Hub prices are near \$3 per MMBtu: prices in Pennsylvania (Leidy) are near \$1 per MMBtu (Figure 8).

Figure 8: Recent Natural Gas Spot Price



Source: NYMEX

Domestic natural gas production creates jobs, tax revenue and environmental benefits. The current low price environment along with a strong supply picture suggests that we can take even greater advantage of the opportunities presented by increased use of natural gas. A robust natural gas export policy provides us another opportunity to create a new demand outlet and strengthen our nation's energy security.

A strong LNG export policy and the benefits that come with it will require enabling infrastructure. We, therefore, urge policymakers at all levels, with the appropriate public input, to seize the opportunity to enhance our nation's energy infrastructure so that we can continue to benefit from our natural gas abundance. The investments that the industry is making in infrastructure will allow producers to capture and bring this valuable resource to domestic and global markets. In order to take full advantage of our natural gas resources, it is vital that we have the ability to build pipelines to ensure transmission and delivery of natural gas to all markets. Abundant domestic natural gas gives the U.S. the unparalleled opportunities discussed above, but in order to harness these opportunities adequate infrastructure must continue to be developed.

Conclusion

The shale energy revolution allows us to transition from a posture of energy scarcity to one of energy abundance. As this hearing demonstrates, the U.S. has the ability to harness clean, abundant, and affordable natural gas for both domestic consumption and for exports. This paradigm shift is driving economic growth, environmental improvements and enhanced energy security. However, in order to fully realize the extraordinary opportunity presented by our natural gas abundance, it is imperative that we adopt sensible policies such as S. 33, which will help provide certainty in our natural gas export markets. ANGA urges the Senate to approve this legislation.

I am grateful to the Chair, the Ranking Member and the Members of the Committee for the opportunity to testify today on behalf of America's Natural Gas Alliance and I look forward to continuing our work together.