It’s A Gas: The Case For Exporting LNG to Japan

By Vance Trefethen

It’s a Gas: The Case for Exporting LNG to Japan 3

OBSERVATION 1. We offer the following DEFINITIONS. 3

OBSERVATION 2. INHERENCY, or the structure of the Status Quo. We offer 3 key FACTS 3

FACT 1. Legal barriers. Because the US has no Free Trade Agreement with Japan, current law imposes barriers on US exports of Liquified Natural Gas to Japan 3

FACT 2. Big delays. Slow approval process blocks US LNG exports 3

FACT 3. Japan needs more natural gas. The Fukushima nuclear meltdown in 2011 forced a rethinking of Japan’s electrical generation capacity, leading to higher demand for natural gas. 4

OBSERVATION 3. We offer the following PLAN, to be voted by Congress and implemented by the President, the Department of Energy (or DOE) and the Federal Energy Regulatory Commission (or FERC) 4

OBSERVATION 4. The Plan works by opening LNG exports to Japan. 4

OBSERVATION 5. The ADVANTAGES. Exporting LNG to Japan produces ADVANTAGES 5

ADVANTAGE 1. New jobs. Exporting LNG brings massive job growth in the US 5

ADVANTAGE 2. Benefit to the Japanese economy. If US exports were legalized, Japan would import 14.7 million tons of gas per year and receive $7.9 billion/year in benefit to Japan’s economy 6

ADVANTAGE 3. Strategic Partnership. We reinforce the US/Japan strategic partnership. We see this in 2 sub-points: 7

A. The Link: US LNG exports to Japan would strengthen the partnership 7

B. The Impact: Strong US/Japan alliance is key to prosperity and success of the Asia-Pacific region 7

2A EVIDENCE: EXPORT LNG TO JAPAN 8

DEFINITIONS & BACKGROUND 8

Definition of LNG 8

INHERENCY 8

US can only export LNG freely to countries that have a free trade agreement. The rest require special approval 8

List of the 20 countries with whom the U.S. has a Free Trade Agreement (FTA) [Japan isn’t on the list] 8

Dept of Energy LNG export approval standards are unpredictable, complicated, and wrong 9

Regulatory delays block US exports of LNG to Asia. The Dept of Energy approval process is too slow 9

“Obama approved an export terminal” – Response: It’s still very difficult to export LNG. Many projects remain blocked 9

Federal law requires permits to export natural gas to non-FTA countries. 28 LNG terminals are waiting for approval 10

Japan is the only country ready to import US Liquified Natural Gas – but the US isn’t ready to export 10

Japanese government says they want to import LNG from the US for power generation to replace nuclear energy 10

SOLVENCY / ADVOCACY 11

NASA universe origin research budget is $607 million. 11

Doesn’t make sense to keep banning exports of LNG to Japan 11

Shrinking window of opportunity: US should increase LNG exports to Japan 11

Japan is a major potential export market for US LNG 11

US can successfully export LNG to Japan based on current market conditions 12

DOE and FERC can approve LNG exports 12

“Low oil prices dropped the market” – Response: But long-term growth prospects are still good 12

“Japan will restart nuclear reactors, so they don’t need our LNG” – Response: Japan would still benefit by restarting nuclear energy AND importing US LNG at the same time 13

“Shale gas production will decline / won’t meet expectations” – Response: Won’t happen. Shale gas will increase and costs of production will decline in the future 13

Plenty of gas to export: U.S. supplies will keep rising for decades 13

ADVANTAGES 14

LNG exports would help Japan’s economy and energy security 14

Net economic benefits of LNG exports are all positive: The more we export the better we are 14

US economy would grow as the volume of LNG exports increases 14

Now is the key time to strengthen the US/Japan alliance 15

Trade is key to US/Japan relationship, and we need focus on energy 15

DISADVANTAGE RESPONSES 16

Net Benefits: Economic and Geopolitical benefits of exporting LNG far outweigh the negatives 16

Net Benefits: Even the worst case estimates of the LNG export impacts still have positive economic benefit to the US 16

NERA Study: Even if market conditions turned to the worst case, the worse that would happen is the plan would have no impact on the economy 16

“Higher prices for natural gas in the US” – Response: Domestic supplies are in surplus and exports would stimulate higher production, blocking price increases 17

“Blocks use of natural gas in automobiles” – Response: Blocking exports won’t fuel automobiles, it will just keep the gas in the ground 17

“Shortages / higher prices for natural gas” – Response: US consumption will be far less than our production, there’s plenty left over to export 17

“LNG could explode” – Response: It doesn’t explode and has extensive track record of safety 18

“Tanker safety” – Response: LNG tankers are safe and are inspected by the Coast Guard 18

It’s a Gas: The Case for Exporting LNG to Japan

The 2011 tsunami and earthquake in Japan resulted in a re-evaluation of their nuclear energy policy after the Fukushima reactor meltdown. Japanese demand for natural gas is climbing and the U.S. is a big producer. The solution ought to be easy: export US gas to Japan. But nothing is easy in the world of politics and energy. If politics weren’t involved, it would be obvious that: The United States federal government should substantially reform its trade policy with one or more of the following nations: China, Japan, South Korea, Taiwan.

OBSERVATION 1. We offer the following DEFINITIONS.

**Trade:** “: the activity or process of buying, selling, or exchanging goods or services” (Merriam Webster Online Dictionary, copyright 2015 <http://www.merriam-webster.com/dictionary/trade>)

**Policy:** “a high-level overall plan embracing the general goals and acceptable procedures especially of a governmental body” (Merriam Webster Online Dictionary, copyright 2015 <http://www.merriam-webster.com/dictionary/policy>)

**LNG:** Liquified Natural Gas

OBSERVATION 2. INHERENCY, or the structure of the Status Quo. We offer 3 key FACTS

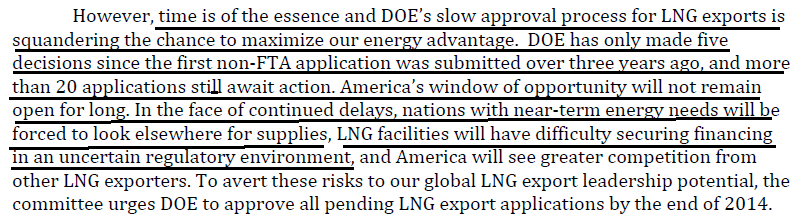
FACT 1. Legal barriers. Because the US has no Free Trade Agreement with Japan, current law imposes barriers on US exports of Liquified Natural Gas to Japan

ENERKNOL RESEARCH 2015 (a US energy research company based in New York) FERC Advances Oregon LNG Export Facility As Congress Moves To Fast-Track New Trade Legislation 4 May 2015 BREAKING ENERGY <http://breakingenergy.com/2015/05/04/ferc-advances-oregon-lng-export-facility-as-congress-moves-to-fast-track-new-trade-legislation/> (brackets added)

Owing to the 1938 Natural Gas Act (NGA), the DOE [Dept of Energy] is responsible for reviewing LNG export applications and determining whether they are in the public interest. Section 3(c) of the 1992 Energy Policy Act altered DOE authority, enabling essentially open trade with countries that hold free trade agreements (FTA) with the U.S. The DOE must treat applications to export LNG to FTA countries as consistent with the public interest and approve them without modification or delay. These FTA applications therefore do not require the same public interest review as non-FTA applications. Twenty FTA nations may currently receive U.S. LNG exports under the revised law. However, none of the major LNG importers – Japan, South Korea and China – are included on that list.

FACT 2. Big delays. Slow approval process blocks US LNG exports

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE 2014 (Prepared By the Energy and Commerce Committee, Majority Staff) Prosperity at Home and Strengthened Allies Abroad – A Global Perspective on Natural Gas Exports 4 Feb 2014 <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/20140204LNGexports.pdf>



FACT 3. Japan needs more natural gas. The Fukushima nuclear meltdown in 2011 forced a rethinking of Japan’s electrical generation capacity, leading to higher demand for natural gas.

TANAY VORA AND SHARAD SAXENA 2015. (both are with Energy Insights, McKinsey & Company, an energy services and research consulting firm. Vora – Energy Modeling Specialist. Saxena - Analytics Manager) Jan 2015 Japan’s uncertain energy future in the post-Fukushima era <http://www.mckinseyenergyinsights.com/insights/japan%E2%80%99s-uncertain-energy-future-in-the-post-fukushima-era.aspx>

During the past three years, as it progressively shut down all nuclear power plants, Japan has relied on fossil fuels to meet its energy shortfall. The share of electricity generated from fossil fuels has increased from 62% to 85% between 2010 and 2012.  Increased coal, oil and gas imports have cost Japanese utilities an extra $28 billion a year since 2011, putting Japan in a negative trade balance for the first time in decades. Household electricity prices have increased by more than 50% during the past two years from 10ȼ/KWh to 16ȼ/KWh.   
Oil consumption in power plants witnessed a sharp increase from 2011 to 2014, but the high cost of importing oil and concerns about unclean fuel are likely to reverse this trend by 2020. Coal and natural gas are the only viable options among fossil fuels for generating electricity. While it is possible to produce electricity for an average $80-85/MWh using coal, making it by far the cheaper of the two fuels, gas prices have dropped ($12-13/mmbtu as of Q3 2014), making gas the second most competitive fuel costing an average $100-105/MWh.   
Coal is the cheapest option but it is unpopular among environmental lobbyists and projects that use coal have a long lead time. These factors make gas a favorable choice for capacity expansion. Japan's efforts to procure cheaper North American LNG in the coming years are expected to boost the build-up of combined cycle gas turbine (CCGT) plants.

OBSERVATION 3. We offer the following PLAN, to be voted by Congress and implemented by the President, the Department of Energy (or DOE) and the Federal Energy Regulatory Commission (or FERC)

1. The Dept. of Energy grants permission for all LNG exports to Japan.
2. Funding from general federal revenues and cuts in the NASA budget for research on the evolutionary origin of the universe.
3. Enforcement through the Justice Department, using existing laws and mechanisms.
4. Plan takes effect 3 days after an Affirmative ballot.
5. All Affirmative speeches may clarify.

OBSERVATION 4. The Plan works by opening LNG exports to Japan.

JULIA COLLINS, BARBARA ADAIR, RODOLFO DE LA CRUZ, JOHN GILLIS, ZHENG ZHU 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

The existing legal framework makes it more complicated for the United States to export to countries with which it does not have a free trade agreement. To expedite LNG exports to Japan (which does not have a free trade agreement with the United States) an exception should be established for the 20 companies that have already submitted export applications. This allows the free market to determine whether exporters will be competitive enough to survive. This will speed the path to the FERC’s regulatory processes, which will help convert, update, and build liquefaction plants.

OBSERVATION 5. The ADVANTAGES. Exporting LNG to Japan produces ADVANTAGES

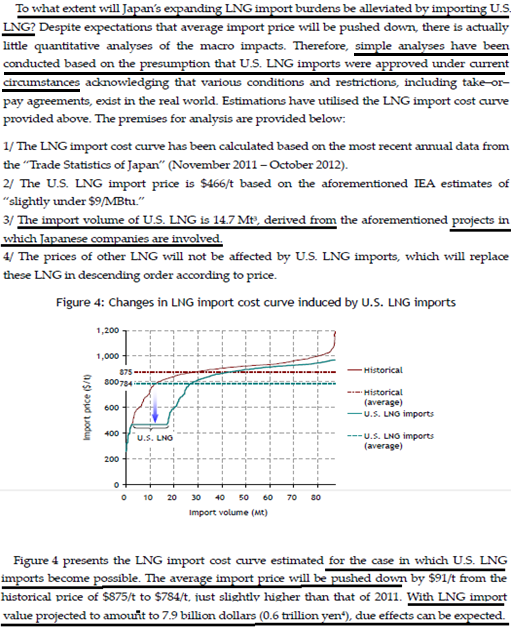
ADVANTAGE 1. New jobs. Exporting LNG brings massive job growth in the US

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf>

The export of liquefied natural gas – or LNG – represents one of the most promising economic opportunities of the shale revolution. These exports will significantly reduce our trade deficit, increase government revenues, grow the economy, and support millions of U.S. jobs in engineering, manufacturing, construction, and facility operations.

ADVANTAGE 2. Benefit to the Japanese economy. If US exports were legalized, Japan would import 14.7 million tons of gas per year and receive $7.9 billion/year in benefit to Japan’s economy

AKIRA YANAGISAWA 2013. (Senior Economist, Energy Demand, Supply and Forecast Group at the Institute of Energy Economics, Japan; Master of Administration Engineering, Science and Technology, Keio University Graduate School) “The Burden Reduction Effects of Importing U.S. LNG for Japan” Jan 2013 <https://eneken.ieej.or.jp/data/4703.pdf> (“Mt” in the article = “million tons”)



ADVANTAGE 3. Strategic Partnership. We reinforce the US/Japan strategic partnership. We see this in 2 sub-points:

A. The Link: US LNG exports to Japan would strengthen the partnership

JULIA COLLINS, BARBARA ADAIR, RODOLFO DE LA CRUZ, JOHN GILLIS, ZHENG ZHU 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Exporting LNG to Japan makes strategic sense for the United States. The economic impact will enhance President Obama’s “Pivot towards Asia.” trans-Pacific trade is worth hundreds of billions of dollars annually, and U.S. exports to the Asia-Pacific region totaled $895 billion in 2011. LNG exports to Japan will reinforce an economic and strategic focus on Asia. Aided by LNG exports to Japan, the United States will keep a foothold and open access to the region. Japan is the number one LNG importer in the world. Additionally, post-Fukushima Japan depends on natural gas now that its demand has shifted away from nuclear sources. American gas exports to allies such as Japan allow for more steady energy markets that reinforce strategic partnerships. There are regasification plants along much of Japan’s coastline.

B. The Impact: Strong US/Japan alliance is key to prosperity and success of the Asia-Pacific region

IAN EASTON, RANDALL SCHRIVER, AND SABRINA TSAI 2014. (Easton – master’s degree in China studies; research fellow at the Project 2049 Institute, a Virginia-based think tank where he conducts research on defense and security issues involving the U.S., China, Japan, and Taiwan. Schriver - founding partners of Armitage International LLC, a consulting firm that specializes in international business development and strategies; former Deputy Assistant Secretary of State for East Asian and Pacific Affairs. Tsai - research associate at the Project 2049 Institute, where she conducts research and monitors U. S. foreign policy towards the Asia-Pacific region) THE ALLIANCE - TOWARD A STRONGER U.S.-JAPAN PARTNERSHIP 18 July 2014 <http://www.project2049.net/documents/US_Japan_SPF_Capstone_Paper_2014.pdf>

The most important aspect of Japan’s national security strategy is its defensive alliance with the United States. Since the end of the Second World War, the U.S. security commitment to Japan has served as an anchor stabilizing the region and enabling growth. The stunning political and economic transformation of post-war Japan created the world’s second most prosperous country after the United States and a model for other aspiring regional powers to follow. Arguably, democracy and prosperity would not have flourished in South Korea and Taiwan in the absence of the U.S.-Japan alliance; Australia, Singapore and Hong Kong would not enjoy their current standards of living; and China would not be an emerging great power. In ways large and small the U.S.-Japan alliance has served as a pillar supporting the dramatic rise of the Asia-Pacific on the world stage.

2A EVIDENCE: EXPORT LNG TO JAPAN

DEFINITIONS & BACKGROUND

Definition of LNG

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf> (brackets added)

LNG, or liquefied natural gas, is a clear, odorless, noncorrosive, nontoxic liquid that is formed when natural gas is cooled to around -260 [degrees] F[ahrenheit]. This shrinks the volume by about 600 times, making the resource easier to store and transport through marine shipments.

INHERENCY

US can only export LNG freely to countries that have a free trade agreement. The rest require special approval

Bryan Riley 2013 (senior analyst in trade policy at Heritage Foundation ) 17 June 2013 Natural Gas Exports: Remove Government Barriers <http://dailysignal.com/2013/06/17/natural-gas-exports-remove-government-barriers/>

Currently, the U.S. can freely export LNG to another country only if it has a free trade agreement with that country. Requests to export to the rest of the world must be approved by the Department of Energy (DOE) on a case-by-case basis. This results in costly [delays](http://www.reuters.com/article/2012/09/17/usa-lng-report-idUSL1E8KHF5T20120917).

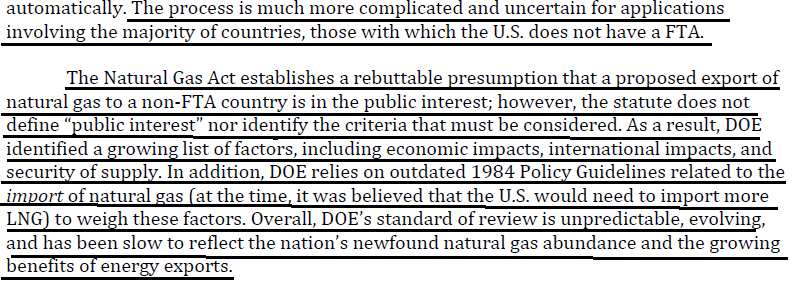
List of the 20 countries with whom the U.S. has a Free Trade Agreement (FTA) [Japan isn’t on the list]

US Dept of Commerce 2015. International Trade Administration “FREE TRADE AGREEMENTS“ <http://www.trade.gov/fta/>



Dept of Energy LNG export approval standards are unpredictable, complicated, and wrong

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE 2014 (Prepared By the Energy and Commerce Committee, Majority Staff) Prosperity at Home and Strengthened Allies Abroad – A Global Perspective on Natural Gas Exports 4 Feb 2014 <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/20140204LNGexports.pdf>



Regulatory delays block US exports of LNG to Asia. The Dept of Energy approval process is too slow

ENERKNOL RESEARCH 2015 (a US energy research company based in New York) FERC Advances Oregon LNG Export Facility as Congress Moves to Fast-Track New Trade Legislation 27 Apr 2015 <https://enerknol.com/ferc-advances-oregon-lng-export-facility/>

On April 17, 2015, the Federal Energy Regulatory Commission (FERC) issued a notice of Schedule for Environment Review of the $6 billion Oregon LNG export terminal, setting a final review date of February 2016. The FERC filing is a major step forward for Oregon LNG, which has been stuck in limbo for seven years due to market dynamics and regulatory delays, but does little to mitigate concern over the lengthiness of bureaucratic review. The regulatory delays facing U.S. LNG export projects has allowed competing projects in Australia to race ahead in supplying growing Asian demand. The Department of Energy approval process has been repeatedly criticized by industry and members of Congress for its lengthy delays and opaque processes – due in part to the tremendous scrutiny of FERC’s review, as well as the vague timeline for final authorization.

“Obama approved an export terminal” – Response: It’s still very difficult to export LNG. Many projects remain blocked

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

As the law stands, it is very difficult for U.S. firms to export gas to countries with which the U.S. does not have a free trade agreement. The Obama administration and the Department of Energy (DOE) have recently moved forward in approving a liquefaction terminal for the exportation of U.S. liquefied natural gas (LNG) but only after a lengthy bureaucratic process. This is just the first of many projects that should be prioritized.

Federal law requires permits to export natural gas to non-FTA countries. 28 LNG terminals are waiting for approval

Emma Chanlett-Avery, Mark Manyin, Ian Rinehart, Rebecca Nelson & Brock Williams 2015. (all with Congressional Research Service: Chanlett-Avery – Coordinator Specialist in Asian Affairs. Manyin - Specialist in Asian Affairs. Rinehart - Analyst in Asian Affairs. Nelson - Specialist in International Trade and Finance. Williams - Analyst in International Trade and Finance) April 23, 2015 Japan-U.S. Relations: Issues for Congress <https://www.google.fr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCEQFjAA&url=https%3A%2F%2Fwww.fas.org%2Fsgp%2Fcrs%2Frow%2FRL33436.pdf&ei=4a5wVbTeLoWTU4PqgpAG&usg=AFQjCNHN0eJou5nSCj_nD17ULR5TAsQiRw&sig2=-0iOEggVSnHQPrkHkol0kw&bvm=bv.95039771,d.d24>

The Natural Gas Act requires that DOE issue a permit to export natural gas to non-FTA countries, including Japan, if DOE determines that such export would be in the public interest. A DOE-commissioned study concluded in December 2012 that LNG exports would produce net economic benefits for the United States, but the study has been controversial. Critics of increased exports have raised concerns about the environment and higher gas prices for domestic industries and consumers. As of December 2014, there are approximately 28 terminals awaiting DOE approval to export LNG to non-FTA countries.

Japan is the only country ready to import US Liquified Natural Gas – but the US isn’t ready to export

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Because Japan has extensive regasification infrastructure already in place, with corresponding port access and existing storage facilities, its costs will be minimal. Unlike other potential partners, Japan is prepared to meet higher levels of imports if the United States is able to increase export facilities. Other countries have yet to build significant import facilities and regasification infrastructure. Ultimately, Japan is prepared, but the United States is not. Political and physical obstacles to exportation remain, which the United States must address to move forward with LNG exports.

Japanese government says they want to import LNG from the US for power generation to replace nuclear energy

Reuters news service 2012. (journalists Ayesha Rascoe and Roberta Rampton) 1 Nov 2012 U.S. shale gas boom requires rethink of natgas export policy: Senator <http://articles.chicagotribune.com/2012-11-01/business/sns-rt-us-usa-lng-exportsbre8a103z-20121101_1_shale-gas-natural-gas-cheniere-s-sabine-pass>

Japan is one of the world's top LNG consumers, and counts on LNG imports for almost half of its energy requirements after it took its nuclear reactors offline following the Fukushima disaster. Its LNG prices are about five times U.S. prices, and the Japanese government has said it would like to see more imports from the United States.

SOLVENCY / ADVOCACY

NASA universe origin research budget is $607 million.

Steven Howell 2014. (Director of Public Policy and Government Relations for the American Institute of Aeronautics and Astronautic) “National Aeronautics and Space Administration”  <http://www.aaas.org/sites/default/files/15pch09.pdf>

The Astrophysics Theme’s proposed budget is $607 million, a decrease of $61 million below the FY 2014 level and $10 million below FY 2013.  The Astrophysics Theme is dedicated to the discovery of how the universe works, how it began, how it developed, and whether there could be life elsewhere.

Doesn’t make sense to keep banning exports of LNG to Japan

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf> (ellipses in original)

The U.S. is successfully pushing Japan to reduce its oil imports from Iran, one of its largest traditional suppliers. At the same time, Japan...is buying expensive LNG from both spot markets and traditional suppliers in the Middle East and Asia to replace nuclear power for generating electricity. How can America, having asked Japan to reduce Iranian oil imports, turn around and prohibit the export of surplus natural gas to this key ally?”

Shrinking window of opportunity: US should increase LNG exports to Japan

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Considering the increasingly competitive LNG export climate, the United States faces a shrinking window of opportunity to enter and maintain a competitive advantage in the global market. As such, the United States must open more export facilities, and should establish long-term contracts and agreements to ensure the competitiveness of U.S. natural gas. With this in mind, Japan is an obvious and potentially profitable partner in gas exports.

Japan is a major potential export market for US LNG

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Following the Fukushima nuclear reactor meltdown, Japan has actively pursued alternative sources of energy. Although Japan has recently reactivated some nuclear plants, almost all of Japan’s power generation has been replaced by oil and natural gas. In fact, Japan is now the world’s largest importer of LNG. Considering its high level of demand, this is a major potential market for the United States and reinforces longstanding political and economic ties.

US can successfully export LNG to Japan based on current market conditions

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at Elliott School of International Affairs; currently at U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis - master’s degree in International Affairs from Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Viewing U.S. LNG exports from an industry perspective, the case is even clearer. LNG projects are driven by demand from the buyer. Once a buyer commits, particularly for long-term purchase agreements, the lowest cost offered by a sufficiently large and reliable supplier like the United States will prevail. With many LNG projects driven by the buyer's willingness to sign a long-term purchase agreement, the prospect of an agreement is encouraging. With a strong trade agreement or purchasing structure in place, suppliers in the United States can deliver gas to Japan at a lower, competitive price relative to other energy sources. Furthermore, the abundant natural gas reserves in the United States assure the sustainability of supply.

DOE and FERC can approve LNG exports

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf> (brackets added)

In order to export LNG, the DOE [Dept of Energy] must first grant permission for the natural gas to leave the country. Only then can FERC [Federal Energy Regulatory Commission] take the second step: approving the permit to build liquefaction plants and export facilities. Of the almost two dozen applications waiting to be processed since 2011, only six have been officially approved through this lengthy two-step process. Allocating more funding to DOE and FERC will allow the hiring of additional employees, who can help applicants navigate the complicated application process and review paperwork.

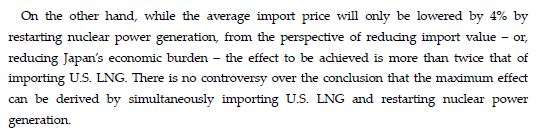
“Low oil prices dropped the market” – Response: But long-term growth prospects are still good

Edward Dodge 2015 (journalist) [Impact of Falling Oil Prices on LNG](http://breakingenergy.com/2015/01/21/impact-of-falling-oil-prices-on-lng/), BREAKING ENERGY, 21 Jan 2015 <http://breakingenergy.com/2015/01/21/impact-of-falling-oil-prices-on-lng/>

Adding to the interest in U.S. supplies have been efforts in recent years to index U.S. LNG to Henry Hub prices rather than crude oil prices. Asian buyers were seeking to break away from expensive oil linked contracts and take advantage of inexpensive U.S. gas prices, but now with crude oil prices in a freefall, buyers are backing away from changing the formula for now. LNG suppliers will be hoping for a cold 2015, but the background of a low oil price environment will place pressure on LNG prices in the near term. However, long-term growth prospects remain compelling due to demand expectations.

“Japan will restart nuclear reactors, so they don’t need our LNG” – Response: Japan would still benefit by restarting nuclear energy AND importing US LNG at the same time

Akira Yanagisawa 2013. (Senior Economist, Energy Demand, Supply and Forecast Group at the Institute of Energy Economics, Japan; Master of Administration Engineering, Science and Technology, Keio University Graduate School) “The Burden Reduction Effects of Importing U.S. LNG for Japan” Jan 2013 <https://eneken.ieej.or.jp/data/4703.pdf>



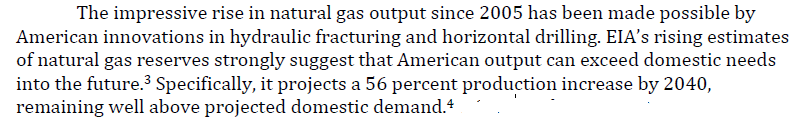
“Shale gas production will decline / won’t meet expectations” – Response: Won’t happen. Shale gas will increase and costs of production will decline in the future

Deloitte MarketPoint LLC and the Deloitte Center for Energy Solutions 2011 (Deloitte MarketPoint is a decision support solutions company focused on fundamental market analysis and price forecasting. DCES – is a group that does studies and holds seminars on energy policy) “Made in America - The economic impact of LNG exports from the United States” <http://www2.deloitte.com/us/en/pages/energy-and-resources/articles/made-in-america-the-economic-impact-of-lng-exports-from-the-united-states.html>

Not only are these investments large, but the arrival of majors signals a new era in the development of shale gas. Unlike in the past when smaller independent companies worked shale gas fields in response to high prices, energy majors have the resources to remain committed to development through the vacillations of gas prices. They have staying power. Furthermore, they have the resources to invest in continued improvements of shale gas technologies and procedures. Their involvement will likely continue to drive down the cost of shale gas production, making more volumes available economically.

Plenty of gas to export: U.S. supplies will keep rising for decades

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE 2014 (Prepared By the Energy and Commerce Committee, Majority Staff) Prosperity at Home and Strengthened Allies Abroad – A Global Perspective on Natural Gas Exports 4 Feb 2014 <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/20140204LNGexports.pdf>



ADVANTAGES

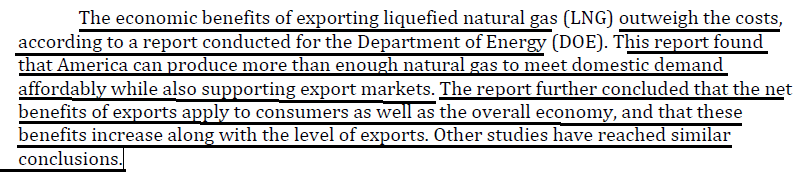
LNG exports would help Japan’s economy and energy security

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Furthermore, Europe is reliant on supply from Russia, with Russian-owned pipelines as the main source of imports. With its concentrated and easily controlled supply routes, the European natural gas market is easily manipulated. Japan’s diverse sources and multiple points of entry allow for a flow of LNG that cannot be easily controlled by a single country. LNG exports from the United States would further diversify Japanese energy sources, and provide Japan lower natural gas prices. This would allow Japan to consume American LNG while contributing to its own energy security.

Net economic benefits of LNG exports are all positive: The more we export the better we are

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON ENERGY AND COMMERCE 2014 (Prepared By the Energy and Commerce Committee, Majority Staff) Prosperity at Home and Strengthened Allies Abroad – A Global Perspective on Natural Gas Exports 4 Feb 2014 <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/20140204LNGexports.pdf>



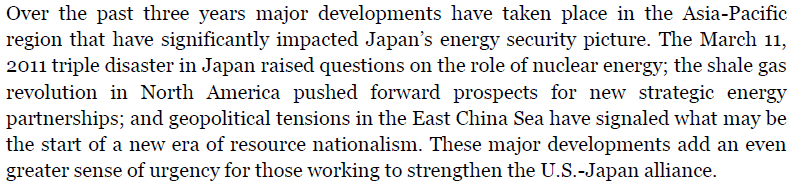
US economy would grow as the volume of LNG exports increases

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at the Elliott School of International Affairs; currently at the U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis is a U.S. Army veteran and graduated with a master’s degree in International Affairs from the Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

U.S. economic welfare will increase as the volume of LNG exports increases. There is a slight forecasted increase in natural gas domestic prices, but there is also an important and corresponding rise in the value of LNG exports. As mentioned before, and as shown in the ICF estimates, this is because there is a net gain for the U.S. economy across a broad set of indicators, including economic wellbeing and rises in GDP. This, in turn, results in a wealth transfer from overseas in the form of payments for the liquefaction services completed in the United States.

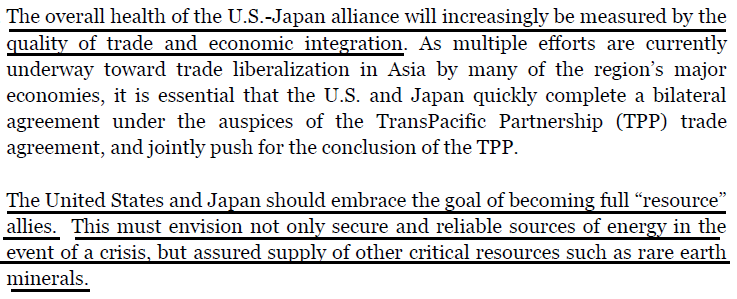
Now is the key time to strengthen the US/Japan alliance

Ian Easton, Randall Schriver, and Sabrina Tsai 2014. (Easton – master’s degree in China studies; research fellow at the Project 2049 Institute, a Virginia-based think tank where he conducts research on defense and security issues involving the U.S., China, Japan, and Taiwan. Schriver - founding partners of Armitage International LLC, a consulting firm that specializes in international business development and strategies; former Deputy Assistant Secretary of State for East Asian and Pacific Affairs. Tsai - research associate at the Project 2049 Institute, where she conducts research and monitors U. S. foreign policy towards the Asia-Pacific region) THE ALLIANCE - TOWARD A STRONGER U.S.-JAPAN PARTNERSHIP 18 July 2014 <http://www.project2049.net/documents/US_Japan_SPF_Capstone_Paper_2014.pdf>



Trade is key to US/Japan relationship, and we need focus on energy

Ian Easton, Randall Schriver, and Sabrina Tsai 2014. (Easton – master’s degree in China studies; research fellow at the Project 2049 Institute, a Virginia-based think tank where he conducts research on defense and security issues involving the U.S., China, Japan, and Taiwan. Schriver - founding partners of Armitage International LLC, a consulting firm that specializes in international business development and strategies; former Deputy Assistant Secretary of State for East Asian and Pacific Affairs. Tsai - research associate at the Project 2049 Institute, where she conducts research and monitors U. S. foreign policy towards the Asia-Pacific region) THE ALLIANCE - TOWARD A STRONGER U.S.-JAPAN PARTNERSHIP 18 July 2014 <http://www.project2049.net/documents/US_Japan_SPF_Capstone_Paper_2014.pdf>



DISADVANTAGE RESPONSES

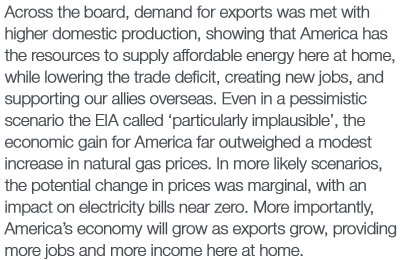
Net Benefits: Economic and Geopolitical benefits of exporting LNG far outweigh the negatives

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at Elliott School of International Affairs; currently at U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis - master’s degree in International Affairs from Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Although those opposed to U.S. LNG exports cite concerns about rising domestic natural gas prices, which could potentially hurt consumers and certain industries that currently enjoy low-cost natural gas, the positives of exporting LNG far outweigh the negatives. With increased LNG exports, the United States will enjoy a more favorable trade balance and advance domestic carbon reduction goals by encouraging the adoption of cleaner-burning natural gas for fuel, while increasing geopolitical stability by supplying energy-poor U.S. allies with natural gas.

Net Benefits: Even the worst case estimates of the LNG export impacts still have positive economic benefit to the US

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf> (EIA = US Energy Information Administration, part of the federal Dept of Energy)



NERA Study: Even if market conditions turned to the worst case, the worse that would happen is the plan would have no impact on the economy

NERA Economic Consulting 2012. (consulting firm in Washington DC, commissioned to do this study by the US Dept of Energy) Macroeconomic Impacts of LNG Exports from the United States <http://energy.gov/sites/prod/files/2013/04/f0/nera_lng_report.pdf>

Net benefits to the U.S. would be highest if the U.S. becomes able to produce large quantities of gas from shale at low cost, if world demand for natural gas increases rapidly, and if LNG supplies from other regions are limited. If the promise of shale gas is not fulfilled and costs of producing gas in the U.S. rise substantially, or if there are ample supplies of LNG from other regions to satisfy world demand, the U.S. would not export LNG. Under these conditions, allowing exports of LNG would cause no change in natural gas prices and do no harm to the overall economy.

“Higher prices for natural gas in the US” – Response: Domestic supplies are in surplus and exports would stimulate higher production, blocking price increases

Julia Collins, Barbara Adair, Rodolfo De la Cruz, John Gillis, Zheng Zhu 2014. (Adair - master’s degree in International Affairs at Elliott School of International Affairs; currently at U.S. Dept of State. Collins - master’s degree candidate in International Affairs at Elliott School of International Affairs. De la Cruz - M.A. from Elliott School of International Affairs; currently a program analyst for the U.S. Dept of Defense. Gillis - master’s degree in International Affairs from Elliott School of International Affairs. Zhu - cross-border investment researcher at Rhodium Group; master’s degree in International Affairs from Elliott School of International Affairs) LNG Exports to Japan: Recommendations for Opening the U.S. Market, INTERNATIONAL AFFAIRS REVIEW, VOL XXIII, No. 1 · FALL 2014 <http://iar-gwu.org/sites/default/files/articlepdfs/6-LNG%20Exports-Collins%20et%20al.pdf>

Many argue that exporting liquefied natural gas will increase American natural gas prices. This raises concerns for utility companies and many industrial users. These fears are offset by the anticipated economic impact of LNG exports on the United States presented by the National Economic Research Associates (NERA) in a recent report. This analysis describes why exporting domestic natural gas will positively impact the U.S. trade balance and advance the adoption of the cleaner-burning fuel around the world. NERA predicts that total U.S. “dry” natural gas production will be between 67 and 81 billion cubic feet per day (Bcf/d) in 2020, while shale gas production will account for 25 to 38 Bcf/d. American domestic consumption is estimated at 68 to 77 Bcf/d. Comparing future consumption and production, the supply of U.S. gas will exceed domestic consumption in the next few decades. Moreover, any price increase for natural gas will incentivize production, preventing domestic gas prices from experiencing exaggerated increases.

“Blocks use of natural gas in automobiles” – Response: Blocking exports won’t fuel automobiles, it will just keep the gas in the ground

[Michael A. Levi](http://www.cfr.org/experts/energy-climate-oil-security/michael-a-levi/b11890) 2012 (senior fellow for energy and the environment at the Council on Foreign Relations) NEW YORK TIMES 15 Aug 2012 The Case for Natural Gas Exports <http://www.nytimes.com/2012/08/16/opinion/the-case-for-natural-gas-exports.html?_r=1>

At the same time, exports would likely reduce global greenhouse gas emissions. Moreover, the small price increases that would result from allowing exports would have at most a marginal impact on the use of natural gas as fuel for cars and trucks. Blocking exports wouldn’t push natural gas into automobiles — it would mostly keep it in the ground, because there would be less incentive to extract it.

“Shortages / higher prices for natural gas” – Response: US consumption will be far less than our production, there’s plenty left over to export

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf>

Estimates of the United States’ natural gas resource base dwarf projections for total cumulative consumption and cumulative exports (2015–2035). The U.S. Energy Information Administration (EIA) estimates that total U.S. consumption of natural gas from 2015 to 2040 is only 31.6% of their resource estimates, and consumption is only 17% of resource estimates by ICF International. And export amounts in the EIA’s AEO 2015 Reference Case projections in no way threaten America’s supply of natural gas.

“LNG could explode” – Response: It doesn’t explode and has extensive track record of safety

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf>

LNG is not stored under pressure and is not explosive or flammable in its liquid state, and it cannot be released rapidly enough to cause overpressures associated with explosions. LNG has been safely handled for several decades, with LNG vessels having made more than 100,000 voyages without major accidents or safety problems. The LNG industry is highly regulated by the Federal Energy Regulatory Commission, the Department of Transportation, the U.S. Coast Guard and the Department of Homeland Security, and other agencies to ensure that vessels, facilities and personnel provide and deliver safe operations and transport.

“Tanker safety” – Response: LNG tankers are safe and are inspected by the Coast Guard

American Petroleum Institute 2015. Liquefied Natural Gas EXPORTS - America’s Opportunity and Advantage, May 2015 <http://www.api.org/~/media/files/policy/lng-exports/lng-primer/liquefied-natural-gas-exports-lowres.pdf>

LNG has been safely handled for several decades, more than 135,000 LNG carrier voyages have taken place without major accidents or safety or security problems, either in port or at sea. LNG history in the US dates back to 1940’s and LNG tanker trade initiated with exports in 1969. LNG ships are double-hulled, with more than six feet of void space or water ballast between the outer and inner hulls and the cargo tanks. The double hulls help to prevent leakage or rupture in the event of an accident. LNG ships are also equipped with sophisticated leak detection technology, emergency shutdown systems, advanced radar and positioning systems, and numerous other technologies designed to ensure the safe and secure transport of LNG. The U.S. Coast Guard determines the suitability of every LNG ship that delivers cargoes into and out of the U.S. through a rigorous annual inspection. If a ship fails the inspection, all deficiencies must be fixed before it can unload its cargo or leave the country.