Removing Restrictions on Liquid Natural Gas Exports: A Gift to the U.S. and Global Economies

Nicolas D. Loris

Abstract
The U.S. is the global leader in natural gas production. Energy companies have an opportunity to capitalize on America’s resource abundance and world energy demands even further by exporting liquefied natural gas (LNG). February 2016 marked the first time in half a century that a company exported LNG from the contiguous U.S., providing economic benefits here and abroad. However, a burdensome environmental review process and an unnecessary public interest determination made by the Department of Energy slows the process of shipping LNG to the desired destination. Both administrative and legislative reform will stimulate investment in energy in the U.S. and increase supply diversity for America’s allies, providing greater choices for consumers and creating a more mobile natural gas market.

The U.S. is the world’s leading natural gas producer. The International Energy Agency projects that the U.S. could become the world’s second largest liquefied natural gas (LNG) exporter by 2022.1 The expansion of U.S. LNG exports would significantly increase growth in both the domestic and global economies. Past reform attempts of the export process have failed to achieve meaningful results. Congress and the Trump Administration should see to it that effective reform takes place on both the administrative and legislative levels, while also delegating authority to the states. These reforms should expedite export-permit applications and environmental-impact assessments, while also allowing for the ultimate removal of the Department of Energy (DOE) from the process—as the agency’s present role is nothing more than an impediment in the export process.

Key Points

- Liquid natural gas (LNG) exports would strengthen America’s energy dominance and provide a huge boon to the economy, creating jobs and expanding energy infrastructure, while also strengthening relationships with global trading partners.
- Increased LNG exports would increase supply diversity, providing greater choices for consumers and creating a more mobile natural gas market.
- The Trump Administration should streamline the environmental review and permitting process, and Congress should reform the environmental assessment process and create a framework that empowers states to manage the environmental review and permitting processes.
- The Department of Energy’s (DOE) role in permit authorization is unnecessary. Congress should remove the DOE from the export-permitting process altogether.
The U.S. Is Ready and Able for Energy Market Leadership in LNG Exports

With plentiful reserves and innovative technologies that unleashed an energy renaissance, the U.S. has become the world’s leading natural gas producer.2 With more than 2,500 trillion cubic feet (Tcf) of technically recoverable natural gas, the U.S. has approximately a century’s worth of natural gas beneath its soil at current consumption rates.3 In spite of obstructionist policies that lock up energy-rich lands and waters, increased domestic supplies have directly lowered energy bills. Lower natural gas prices have lowered input costs for businesses across the country and incentivized investments in U.S. energy manufacturers, generating significant economic growth and job creation around the country. The American Chemistry Council noted that 310 projects totaling more than $185 billion in new chemical industry investment have been launched largely because of affordable, abundant natural gas.4

U.S. natural gas producers are more than capable of meeting an ever-increasing global energy demand. The Energy Information Administration (EIA) projects world energy consumption to increase 48 percent by 2040, with natural gas projected to be the fastest growing conventional fuel.5 The EIA projects global LNG trade will increase from 12 Tcf in 2012 to 29 Tcf by 2040.6 Spencer Dale, group chief economist at BP, projects steady and strong growth of global LNG demand, estimating that LNG will grow seven times faster than piped natural gas. Dale also projects that by 2035 LNG will account for half the natural gas trade, increasing from 32 percent today, and that the U.S. will be a prominent supplier, providing 19 billion cubic feet per day (Bcf/day).7

February 2016 marked the first time in more than 50 years that a company in the contiguous U.S. exported LNG. Through April 2017, Cheniere Energy has delivered LNG through its Sabine Pass Terminal between Louisiana and Texas to 23 different countries spanning five different continents.8 Sabine Pass is the only operating export terminal in the lower 48 states, but the Federal Energy Regulatory Commission (FERC) has approved several more projects, some of which are under construction.9

Domestic Economic Benefits of Increased LNG Exports

The U.S. economy will benefit tremendously from the export of LNG. The exports will expand market opportunities and generate more domestic energy infrastructure investment. Several studies supply compelling benefit projections to support this.


LNG exports for the DOE, in which they examined export volumes of 6 Bcf/day and 12 billion Bcf/day. The projected benefits include tens of billions of dollars in export revenue, tens of billions of dollars in increased gross domestic product (GDP), and tens of thousands of new jobs. The study found that the higher the volume of exports, the greater the economic benefits would be, including in a scenario of unlimited exports.\(^\text{11}\)

- In October 2015, another DOE-commissioned study by Rice University’s Center for Energy Studies and Oxford Economics found that increasing LNG exports from 12 Bcf/day to 20 Bcf/day would increase GDP between $7 billion–$20 billion annually from 2026–2040.\(^\text{12}\)

In response to the concern that exporting LNG will raise domestic prices,\(^\text{13}\) the economic gains overall dwarf any minimal adverse impact on domestic users from higher prices. All studies did find that LNG exports would raise domestic natural gas prices, but that the impact would be marginal, and domestic producers would respond by increasing supplies.\(^\text{14}\) Furthermore, providing other countries with cheaper energy would not only lower the prices of products that the U.S. imports (because businesses abroad will make their products more cheaply), but also promote economic development in those countries, resulting in more wealth to purchase American goods.

**Global Economic Benefits of Increased LNG Exports**

Past efforts with regard to energy policy have too often been interventionist and restrictionist in nature—often under the pretext of strengthening national security. The biofuels/ethanol mandate, alternative fuel subsidies, energy conservation regulations, and Department of Defense renewable energy mandates have in fact had a negligible impact on national security. However, their manipulation of energy markets has hurt the U.S. and global economies. Policies that generate supplies and increase competition and access will ultimately reduce the manipulation of energy markets. LNG exports provide such access and choice. Removing restrictions on energy exports would have a number of important global geopolitical and economic benefits.

- **Marginalizing the ability to influence energy supplies for political purposes or economic influence.** The 2014 crisis in Crimea revolving around Russia’s invasion of Ukraine demonstrates how liberalizing global natural gas markets would be an effective geopolitical tool. Russia derives much of its power in the region from its control of energy supplies and distribution systems. Nations, both in Europe and around the world, want to diversify their energy sources. U.S. energy producers can play a critical role in meeting that demand. The fact that Cheniere has already shipped LNG to 23 different countries in just over a year’s time demonstrates how quickly the U.S. could help nations around the world diversify their energy supplies.

- **Overcoming transportation obstacles with superior mobility.** Unlike natural gas traveling through pipelines, companies can ship LNG cargo much more easily to different regions of the world. In the event of a supply disruption, suppliers can redirect LNG to countries with the greatest need. Nations around the world are installing the necessary re-gasification, storage, and transport infrastructure at a rapid pace.\(^\text{15}\)

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11. Ibid.


14. Ibid.

Providing an opportunity for changes in global gas market contracts. The increased volume of new suppliers and greater volumes of LNG in the global market are also changing the nature of LNG contract commitments. While long-term contracts were desirable because they reduced cash-flow variability, both buyers and sellers desire more liquidity and flexibility in the contracts to capture potential price advantages. As a result, there could be a greater shift to short-term contracts, spot market trading, or producers holding more uncontracted supplies. The combination of long-term contracts that provide stability with the flexibility of short-term contracts, swaps, re-exports, and spot contracts could fundamentally change the global gas market, all the while improving security in the U.S. and around the world.

The Current Permitting and Export Process

The Natural Gas Act of 1938 grants the FERC the authorization to site both import and export onshore and near-shore facilities in accordance with the National Environmental Policy Act (NEPA) and additional environmental statutes. At present, in order to export natural gas from the United States, companies must obtain approval from both the FERC and the DOE. The FERC’s security review includes consultation with the Coast Guard for security and satisfaction of requirements under the Maritime Transportation Security Act of 2002 and the Department of Transportation’s Office of Pipeline Safety requirements. For offshore LNG facilities, per the Deepwater Port Act, the Maritime Administration (MARAD) and the Coast Guard, in collaboration with other agencies, conduct the environmental review to satisfy NEPA requirements.

After a company files an application with the DOE, the department must determine whether the project is in the public’s interest. The DOE can arbitrarily deny a permit if the agency believes the total volume of natural gas exported is not in the public’s interest. A facility is automatically authorized if the country the U.S. is exporting to is a recipient nation that has a free trade agreement (FTA) with the U.S. If the importing country does not have an FTA, the DOE must then publish the notice in the Federal Register for a comment period, and ultimately determine if the facility is in the public’s interest. As of July 2014, the DOE had been unnecessarily slow-walking the process, reviewing each project at a painstakingly unhurried rate.

Past Reforms of the Permitting and Export Processes

In August 2014, in an attempt to improve the permitting process, the DOE announced it would only consider a project after the FERC completed the environmental impact assessment, rather than give conditional approval to projects as it had been doing.

Two consequential reviews, one supportive and the other critical, of that DOE decision that emerged are worth considering.

Review by the Brookings Institution. David L. Goldwyn, the author of the Brookings review, supported the decision, arguing it would remove risk, level the playing field, and make the analysis of each project more timely and accurate. For example,

19. Ibid.
before the change, a project could receive the DOE’s conditional approval in a given year. However, the FERC environmental review and permitting takes four years or longer. Therefore, the DOE’s public interest determination would be misguided because it would have become outdated and would no longer reflect current market conditions.

Goldwyn also argues that the total amount of natural gas receiving conditional approval under the old system could impact future projects if the federal government implements an export cap as part of its public interest analysis. He writes,

The prior procedure was politically provocative in that it exaggerated the cumulative impact of project approvals by scoring the cumulative export volumes of conditional approvals—many of which might never receive environmental clearance or final investment approval. The result was that projects which might make it through the environmental review, led by the Federal Energy Regulatory Commission (FERC) or the U.S. Maritime Administration (MARAD) depending on jurisdiction, might not be considered until they came up in the queue, possibly years later, or might be rejected altogether because they exceeded the soft cap of 12 billion cubic feet per day (Bcf/d).24

However, the DOE has never announced any indication it would implement any export limits.

**Review by the American Petroleum Institute (API).** Erik Milito, the author of the API review, criticized the DOE’s procedural change, claiming it would cause increased delays and uncertainty by adding months of additional review to an already completed environmental review. Moreover, Milito argues that withdrawing the conditional approval process removes an important signal to markets, investors, and allies who want to purchase American natural gas.25 He correctly calls for blanket authorization or, at a minimum, having the DOE issue a final order within 10 days of the completion of the NEPA process.26

**Flaws in Principle and Approach Committed Past Reforms to Failure**

Both the Brookings and the API review miss the underlying problem with the 2014 DOE decision and with the attempts at reform in general.

Energy producers should have the freedom to benefit from economic opportunities with LNG-recipient nations. Therefore, the question should not be whether the DOE should grant conditional approvals or wait until after the NEPA review; rather, it should be why the DOE should be involved in the process at all. The decision to export natural gas should be an economic one, not an administrative one left up to the DOE, the FERC, or any other federal agency.

If the DOE were sincere in its role to protect the public interest, it would have accepted agency-endorsed analysis that exporting as much LNG as possible is an overall benefit to economic welfare. In several economic analyses, NERA reached the conclusion that “LNG exports provide net economic benefits in all the scenarios investigated, and the greater the level of exports, the greater the benefits.”

The DOE’s obstruction of LNG exports follows in the same vein as the Obama Administration’s obstruction of the Keystone XL pipeline. Both are cases in which national and public interest determinations have been manipulated into pretexts to obstruct energy infrastructure for no meaningful environmental benefit. In the case of Keystone XL, the State Department concluded the pipeline was environmentally safe and would provide a steady oil supply from a friendly, secure, and reliable trading partner in Canada; however, the Obama Administration used a national interest determination to reject the pipeline permit.27 Such determinations result from flawed principles and misguided understandings of the global energy market. Energy investments for production, sale, and consumption should be market-based, not held hostage to procedural red tape, subjective determinations, or political biases.

24. Ibid.
26. Ibid.
Recommendations for Reforms

In order to be a leader in LNG trade, the U.S. needs to make sure it does not get in its own way by slow-walking permit applications, dragging out environmental reviews, and holding up projects in the courts. The Trump Administration and Congress should reform a process that is currently too onerous for companies to export LNG.

Administrative Reforms. One of President Trump’s first actions was to sign an Executive Order to expedite environmental reviews for high priority infrastructure projects. Energy infrastructure is a critical component of America’s infrastructure system and the DOE and the FERC can both implement measures to expedite the process to permit LNG facilities. The Administration should:

- **Allow approval of all permit applications to non-FTA countries.** U.S. producers should be allowed to export LNG to any country they see fit. The distinction that exports to FTA countries are in the “public interest” while others are not is, on the whole, an arbitrary one. The U.S. trades regularly with numerous non-FTA nations. Natural gas should be treated as any other good traded around the world.

- **Re-introduce conditional permit approvals or offer approval immediately after FERC review.** The DOE should re-introduce the ability to grant conditional permit approvals before the FERC completes its environmental assessment and automatically issue conditional approvals for all applicants. Alternatively, the DOE could lay the groundwork to make its determination the day that the FERC completes its review, not waiting for any re-hearings.

- **Streamline the NEPA process.** The NEPA requires federal agencies to conduct comprehensive environmental impact assessments for a wide range of projects, including LNG facilities. A number of factors result in NEPA delays at the federal, state, and local level. At the federal level, some of the major issues include differing interpretations of NEPA requirements, failed interagency coordination, administrative bottlenecks, and outdated requirements that fail to take into account changing conditions. In fact, the Obama Administration recognized the federal government can expedite permitting without sacrificing environmental protection by effectively relinquishing NEPA requirements for a large number of projects funded by the American Recovery and Reinvestment Act.

Within the scope of its authority, the Trump Administration should require agencies to complete environmental assessments as expeditiously as possible. Areas for the Administration to fix include:

- **Properly shaping the scope of the project.** Agencies control the substance of a NEPA analysis by shaping the “scope” (i.e., the purpose and need) of the project. As a result, the agencies can effectively control the outcome of the NEPA review through deliberate scoping. Therefore, the utmost constraint should be exercised in scoping to ensure that the NEPA analysis is targeted and relevant, thus helping to reduce legal challenges and shorten the review.

- **Eliminating redundancies.** The multitude of other regulatory requirements makes a full-scale NEPA review both unnecessary and redundant. The Council on Environmental Quality (CEQ) should allow agencies to treat existing analyses as functional equivalents for project elements that have been previously reviewed.

- **Ensuring scientific transparency and integrity.** The scientific integrity of the NEPA process

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suffers from a lack of consistent methodology. The CEQ has left agency officials free to apply any assessment approach of their choosing, but thorough cost-benefit analyses are rare. The CEQ should carefully monitor the scientific validity of information/data used in the review, and reject unsound findings.

- Establishing a lead agency and restricting the input of other agencies. Responsibility for the NEPA review should be assigned to a “lead” department. The involvement of other agencies should be strictly limited to issues that fall within their specified jurisdiction or expertise.

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Legislative Reforms. Previous legislative reform efforts have attempted to address the federal government’s slow-walking of permits by requiring action from the DOE within 30 days of the completion of the FERC’s environmental review.\(^\text{30}\) Although a step in the right direction, a more efficient, streamlined fix to the bureaucratic obstacles would:

- Eliminate the DOE role in the process and prohibit any federal agency from determining natural gas exports based on so-called public interest. The DOE, the FERC, or any other federal agency should not determine what amount of exported natural gas is in the public’s interest. Energy producers should be able to benefit from economic opportunities with LNG-recipient nations if they believe it is in their interest. The DOE’s authorization requirement is a pointless obstacle to the permitting process and should be removed immediately.

- Empower state regulators to manage the environmental review and permitting process of offshore and near-shore export facilities while also allowing the FERC to stay involved. States already have the authority to veto LNG terminals. Rather than take an advisory role to the FERC, states should play a pre-dominant role in authorizing the construction of the terminal. A state’s environmental review and permit approval should be deemed to satisfy all NEPA requirements for an LNG terminal. A state regulator can request technical or safety expertise from the FERC as necessary. In addition, state regulators could work in conjunction with the Coast Guard for its maritime safety and security assessment as well as the Department of Transportation’s Office of Pipeline Safety requirements.\(^\text{31}\) However, the state in which the facility is built should be permitted to defer to the FERC, if that state deems such a step to be in the state’s and the facility’s best interest. Deep-water offshore projects should remain under the jurisdiction of the Maritime Administration and the Coast Guard.

- Repeal or reform the NEPA process. Reforming or repealing the NEPA will not compromise environmental stewardship, but would instead provide an opportunity to remove redundancy in state environmental standards and establish efficient and effective means to protect public health and safety. With the exception of full repeal, reforms to the NEPA should include:

  - Eliminating greenhouse gas emissions analysis from the review process;
  - Narrowing the review to only major environmental issues;
  - Mandating time limits and limiting judicial review;
  - Establishing functional equivalence of a NEPA analysis through federal and state statutes that already require an environmental impact analysis; and
  - Requiring the NEPA to incorporate previous analyses into similar projects.\(^\text{32}\)

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Conclusion

The U.S.’s role as the world’s leading natural gas producer would only be bolstered with increased efficiency and ability to export LNG. Increased LNG exports would generate economic growth both domestically and globally and also have a positive impact on geopolitical affairs. The Trump Administration should take the necessary steps to expedite export permit applications and environmental impact assessments. Comprehensive reform will require removal of the DOE from the process altogether, as the agency is an unnecessary obstacle. Further, empowering the states would create different and more efficient options for permitting, reducing the time frame in which LNG reaches the market, providing significant economic benefits and strengthening U.S. relationships with its global trading partners.

—Nicolas D. Loris is Herbert and Joyce Morgan Research Fellow in Energy and Environmental Policy in the Center for Free Markets and Regulatory Reform, of the Institute for Economic Freedom, at The Heritage Foundation.