

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Jordan Cove Energy Project, L.P. Pacific Connector Gas Pipeline, LP
--

Docket No. CP13-483-001
Docket No. CP13-492-001

I. Summary of FERC Notice of Rehearing for Jordan Cove Energy Project, L.P. and Pacific Connector Gas Pipeline, LP

The application seeks to increase the volume of LNG, for which Jordan Cove Energy Project, L.P. (Jordan Cove) requests export authorization, from the equivalent of 292 Bcf/yr to 350 Bcf/yr of natural gas (0.96 Bcf/d). The DOE/FE has not yet issued a final order on the pending application.

On March 11, 2016, the Federal Energy Regulatory Commission (FERC) issued a decision denying applications for approval and Section 3 authorizations for both the Jordan Cove LNG export terminal and the associated 232 mile pipeline, known as Pacific Connector, under Docket No. CP13-483-000 and Docket No. CP13-492-000 respectively.

In its decision, FERC states:

Because the record does not support a finding that the Jordan Cove LNG Terminal can operate to liquefy and export LNG absent the Pacific Connector Pipeline, we find that authorizing its construction would be inconsistent with the public interest. Therefore, we also deny Jordan Cove's request for authorization to site, construct and operate the Jordan Cove LNG Terminal.

In the order denying the application, FERC describes on pages 7, 8, and 9 the many requests which Jordan Cove was asked to clarify what executed agreements it had for use of the pipeline and export of the LNG. In all cases Jordan Cove says they "had entered into non-binding Heads of Agreements with various Asian companies for liquefaction and transportation capacity." Therefore, they did not have firm contracts to sell the LNG or volume sufficient to justify the pipeline.

II. Industrial Energy Consumers of America

The Industrial Energy Consumers of America is a nonpartisan association of leading energy-intensive trade-exposed (EITE) manufacturing companies with \$1.0 trillion in annual sales, over 2,900 facilities nationwide, and with more than 1.6 million employees worldwide. IECA membership represents a diverse set of industries including: chemical, plastics, steel, iron ore, aluminum, paper, food processing, fertilizer, insulation, glass, industrial gases, pharmaceutical, building products, automotive, brewing, independent oil refining, and cement.

EITE industries use 75 percent of the natural gas and 73 percent of electricity consumed by the manufacturing sector, and would be negatively impacted if natural gas prices increase as a result of exporting LNG. EITE industries account for over 40 percent of all manufacturing jobs.

III. Comments on Jordan Cove Project

a. The FERC March 11, 2016 decision is correct.

Studies report the same conclusion, that there is a worldwide glut of LNG. Multiple studies indicate that it could take until 2030 for global supplies to balance.¹²³⁴⁵⁶⁷⁸⁹ Any LNG export applications that do not have firm long-term contracts to sell its LNG should not be considered for approval. FERC/DOE should not approve LNG export terminals

¹ “LNG glut seen persisting until 2022 but market won't fail, Citigroup says,” Sydney Morning Herald, March 17, 2016.

² “LNG oversupply likely to persist for rest of the decade: Analyst, Huileng Tan, CNBC, March 8, 2016.

³ “The ‘Golden Age of Gas’ Flames Out,” Wall Street Daily, December 7, 2015.

⁴ Joseph Markman, ‘Projects’ Progress Could Mena a World Awash in LNG’, E&P Mag, September 8, 2015.

⁵ ‘LNG oversupply could lead to ‘blood on the battlefield’, Business News (Australia) February 26, 2016.

⁶ ‘LNG Golden Promise Fading for Goldman on Wave of Oversupply’, Bloomberg Business, November 4, 2015.

⁷ ‘LNG oversupply could lead to ‘blood on the battlefield’, Business News (Australia) February 26, 2016.

⁸ ‘LNG Golden Promise Fading for Goldman on Wave of Oversupply’, Bloomberg Business, November 4, 2015.

⁹ <http://af.reuters.com/article/commoditiesNews/idAFL3N16U5C4?sp=true>.

that will not be constructed near-term; otherwise the original “public interest” finding will no longer be valid.

b. FERC has not considered the increased GHG emissions and economic damage due to industrial GHG leakage, an outcome that is also inconsistent with the Obama administration’s climate goals.

Industrial GHG leakage is an internationally recognized public policy issue as nations address climate change. Every DOE-sponsored study that addresses LNG export impacts contains a section that details how LNG exports increase domestic natural gas prices and harm the competitiveness of energy-intensive trade-exposed industries (EITE). IECA has filed comments on those studies and support the conclusions that rising LNG exports and prices do in fact directly harm EITE industry competitiveness. However, IECA has consistently pointed out that each study underestimated the impacts due to the study’s failure to consider the relative loss of competitiveness to foreign competitors and use of outdated and erroneous information and failure to include all of the EITE sectors, among other vital details. The studies did consider the impacts of absolute changes to the price of natural gas to EITE industries. It did not examine impacts by LNG exports lowering the price of natural gas to foreign competitors while increasing the price domestically, thereby substantially reducing relative competitiveness. Importantly, none of the studies consider the impact of substantial increases in CO₂ emissions resulting from industrial GHG leakage. FERC must do so under its environmental evaluation.

Furthermore, there have been five countries, regions, or states that have organized, or tried to regulate GHG emissions. They are the EU ETS, California’s AB 32, Australia’s carbon pollution reduction scheme, Canada and the U.S. American Clean Energy and Security Act of 2009 (H.R. 2454). While each differ, they all have one thing in common – they recognize that CO₂ leakage from the EITE manufacturing industries is not

economically or environmentally desirable, and could significantly undermine efforts to reduce CO₂ emissions.

In 2010, EITE industries consumed 18.8 percent of all U.S. natural gas, 14.9 percent of all U.S. electricity, and 81 percent of all manufacturing energy (including feedstock). Despite this high level of energy consumption, the U.S. manufacturing sector is the only sector of the U.S. economy whose GHG emissions are below 1990 levels. The U.S. manufacturing sector's CO₂ emissions have decreased 3.4 percent¹⁰ since 1990, while expanding value added output by 69.6 percent¹¹, a significant accomplishment.

If EITE industries experience higher natural gas and electricity costs, they will lose market share to their offshore competitors, whose products are most often higher in carbon intensity based on the combination of their production technology, higher carbon fuel mix and the incremental overseas transportation costs. Due to higher natural gas and natural gas-fired electricity generation costs, U.S. companies will move their production to other countries where costs are lower as demonstrated by the migration of heavy industry from the EU. Or, foreign competitors will displace U.S. production.

Figure 1 illustrates this point by comparing the carbon intensity of manufactured products of the U.S. versus China. In this case, Chinese imports emit four times more CO₂ emissions versus manufacturing those same products in the U.S. And, the U.S. manufacturing product trade deficit was \$627 billion in 2015 and 61 percent is with one country, China. The point is that higher absolute and relative natural gas and electricity prices can reduce production of low CO₂ emitting U.S. products and increase imports of high CO₂ emitting products from other countries resulting in a net increase in global GHG emissions.

¹⁰ EIA

¹¹ Bureau of Economic Analysis, U.S. Department of Commerce.

FIGURE 1: GLOBAL INDUSTRIAL SECTOR – 2013

Country	Manufacturing – Value Added (\$Billions)	Manufacturing Industries and Construction (Million tonnes of CO ₂)	Million Tonnes of CO ₂ /Manufacturing Value Added
U.S.	1,943.8	422.1	0.22
China	2,856.9	2,813.1	0.98

Source: International Energy Agency (IEA), The World Bank, <http://data.worldbank.org/indicator/NV.IND.MANF.CD>

EITE industries are important to the U.S. economy because of the following reasons:

- Major EITE industries include: aluminum, steel, plastics, chemicals, paper, glass, fertilizer, food processing, cement, and refining.
- Employs 7.3 million jobs or 59.0 percent of the entire manufacturing sector.
- In 2015, accounted for 7.7 percent of total U.S. GDP.
- Gross output increased 68.2 percent from \$2.2 trillion in 2001 to \$3.7 trillion in 2015.
- Value added increased by 69.6 percent from \$815 billion in 2001 to \$1.4 trillion in 2015.
- Value of shipments increased by 54.2 percent from \$2.2 trillion in 2004 to \$3.4 trillion in 2015.
- Exports increased by 168.3% from \$185 billion in 2002 to \$497 billion in 2015.
- Average annual compensation in 2014 was \$69,979 per year. This is 30.4 percent above the U.S. average.
- Capital expenditures increased by 58.4 percent from \$81 billion in 2001 to \$128 billion in 2014. In 2014, this represented 55.8 percent of all capital investment in the manufacturing sector.
- For every one dollar invested, it returns \$1.35 in indirect economic activity to the economy, the highest economic multiplier effect as compared to all other sectors of the economy.¹²

There are several important characteristics of EITE industries.

- They are energy-intensive. Total direct and indirect energy costs (electricity/natural gas/feedstock), as a percent of total operating costs, is relatively large as compared to other manufacturing and non-manufacturing companies. Ten percent or greater.
- They are trade-exposed. They compete with foreign companies and often in an environment of unfair competition. Some of the foreign competitors are state-owned enterprises. Many countries subsidize electricity and natural gas costs and provide other economic advantages to their manufacturing companies to create jobs and exports for their country. Because of significant foreign competition, they are trade-exposed and do not have the ability to pass through increased energy costs to their customers. If they cannot pass through the costs, they are no longer competitive and go out of business.

¹² National Association of Manufacturers.

Most of the EITE products are commodities that are used by their customers to produce goods that are processed or fabricated into end-use consumer products. In this way, EITE industries produce building block products that the entire economy relies upon for growth and security.

Energy-Intensive Trade-Exposed Manufacturing Sectors	NAICS Code
Food Manufacturing	311
Beverage and Tobacco Product Manufacturing	312
Textile Mills	313
Wood Product Manufacturing	321
Paper Manufacturing	322
Chemical Manufacturing	325
Plastics and Rubber Products Manufacturing	326
Nonmetallic Mineral Product Manufacturing (<i>clay, glass, cement, gypsum</i>)	327
Primary Metal Manufacturing (<i>iron, steel, aluminum</i>)	331
Mining (<i>metal ore</i>)	2122
Mining (<i>nonmetallic minerals</i>)	2123
Petroleum Refineries	324110

Below are studies that clearly illustrate that higher energy prices result in industrial GHG leakage.

- “The Effects of H.R. 2454 on International Competitiveness and Emission Leakage in Energy-Intensive Trade-Exposed Industries,” EPA, December 2, 2009, https://www3.epa.gov/climatechange/Downloads/EPAactivities/InteragencyReport_Competitiveness-EmissionLeakage.pdf
- California AB 32: May 18, 2016 Workshop on Industrial GHG Leakage
 1. Measuring Leakage Risk, UC Berkeley: [International Leakage Paper](#)
 2. Employment and Output Leakage under California’s Cap-and-Trade Program, Resources for the Future: [Domestic Leakage Paper](#)
 3. Production and Emissions Leakage from California’s Cap and-Trade Program in Food Processing Industries: University of California Berkeley [Food Processors Leakage Paper \(CalPoly\)](#)

The above information illustrates that there is a direct cause and effect. When the absolute and/or the relative price of natural gas and natural gas-fired electricity increases, EITE industries competitiveness is directly negatively impacted causing industrial GHG leakage. We urge FERC to consider the increased GHG emissions and negative economic impacts in its decision making.

c. Changes to expand and modify the original application require a new public interest determination.

The FERC and DOE should not approve the expansion/changes to this application request without conducting a new public interest determination which considers the applications' changes in conjunction with the cumulative economic impact of applications and expanded applications that have already been approved nationwide. The Natural Gas Act (NGA) requires that all applications and changes to applications and their volumes of LNG for export to non-free trade countries must be examined to show that such LNG export applications/changes are not in the public interest.

All of the DOE LNG export studies show insignificant net economic gains, higher prices for natural gas, and negative impacts to wages and investment nationally. For the EITE and some non-EITE manufacturing sectors, the studies indicate a loss of competitiveness, investment and output. Studies show that all of the gains are concentrated in favor of those entities that own, produce, and export natural gas, and everyone else in the U.S. economy are negatively impacted. Few gain while the vast majority of Americans lose.

The economic gains are so small that they are within error of the model's capability for a long-term forecast. Economists make clear that any macroeconomic modeling of the U.S. economy for a period of 25 years or more will have outcomes that perform poorly in the long-run and are not encouraged for important decision making. Economists warn that there are even greater errors on studies that evaluate global economic matters as in the case of LNG and the most recent DOE LNG export study entitled, "The Macroeconomic Impact of Increasing U.S. LNG Exports."¹³ Despite this, the DOE has used such studies to justify approval of more LNG export applications.

¹³ The Macroeconomic Impact of Increasing U.S. LNG Exports"
http://energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.

The domestic and international market for natural gas and LNG has changed so dramatically over the last 18 months that the DOE LNG export studies and their scenarios fail to adequately reflect these structural market changes that make the study findings invalid. Importantly, the DOE studies have failed to account for the impact of the falling price of crude oil in their scenarios and the direct impact that it has had and will continue to have on short- and long-term supply and the price of natural gas domestically. The fall of global crude prices has also changed global pricing for LNG that will also impact global demand.

For example, crude oil and NGL prices are a major determinant of U.S. natural gas supply, yet there is no evaluation of this relationship in the DOE LNG export studies. The fall of crude oil prices globally, and how major OPEC countries responded by maintaining production which will keep prices lower, is reducing oil and gas investment, thereby impacting the U.S. investment in oil and gas production. The studies do not consider crude oil at or below breakeven costs.

Both short- and long-term investment in production of oil and gas in the U.S. has been greatly impacted going forward to a degree with which has not been considered in any DOE LNG export study scenario. The historic fundamentals of investment that had relied on cash flow to incent drilling are gone. Lenders require higher prices to justify lending to the industry. Due to lower prices, the value of companies proven reserves have fallen which reduces what lenders will allow companies to borrow. DOE studies have not considered these significant and structural changes to oil and gas investments and the impacts to the supply and price of natural gas for the LNG public interest determination. Lastly, existing studies have failed to include the impact of the EPA's Clean Power Plan and the extended production tax credits for renewable energy.

d. The DOE has not defined the “public interest.”

A U.S. Government Accountability Office (GAO) report¹⁴ states that neither Congress, nor the DOE, has defined the “public interest.” DOE is using guidelines developed in 1984 for LNG imports to inform LNG export public interest decisions.

The GAO report entitled, “Federal Approval Process for Liquefied Natural Gas Exports,” dated September 2014 includes the following statement on page 11.

In passing the NGA, Congress did not define “public interest;” however, in 1984, DOE developed policy guidelines establishing criteria that the agency uses to evaluate applications for natural gas imports. The guidelines stipulate that, among other things, the market - not the government – should determine the price and other contract terms of imported natural gas. In 1999, DOE began applying these guidelines to natural gas exports.”

Criteria used 32 years ago for decision making on LNG *imports* should not be used to inform decision making on LNG *exports*. In 1984, LNG imports were needed and they reduced risks of all kinds to domestic consumers and manufacturers. LNG imports reduce risks – LNG exports increase risk. There is all pain and no gain for consumers.

LNG exports, according to the DOE report, “The Macroeconomic Impact of Increasing US LNG Exports,” will reduce the price that Asian countries pay and increase U.S. prices and eventually, our prices will reach parity with Asia. When this happens, the U.S. will have lost its competitive advantage. Importantly, manufacturers will have lost their competitive advantage, with very serious long-term implications for a viable manufacturing sector, jobs, investment, especially for EITE industries. This does not bode well to reduce the U.S. manufacturing trade deficit that is \$627 billion in 2015 and 61 percent is with one country, China, a major importer of LNG . The point is that much is at stake. The short term decisions by FERC/DOE will have paramount impacts on the future of the manufacturing sector long term.

¹⁴ “Federal Approval Process for Liquefied Natural Gas Exports,” U.S. Government Accountability Office (GAO), September 2014.

IECA is not against exports. We are against excessive exports that can occur because the DOE has not developed appropriate consumer-focused “public interest” determination guidelines that will inform appropriate decision making on LNG export applications and changes to applications.

The DOE should conduct a rulemaking to establish public interest guidelines for LNG exports. DOE and FERC should not give approval or conditional approval to any LNG export application, or authorize the expansion or changes to an LNG export application/terminal that has already been approved or conditionally approved without having established these guidelines and evaluated each application or changes to an application using the new public interest guidelines.

e. DOE-sponsored study “The Macroeconomic Impact of Increasing U.S. LNG Exports” should not be used.

The DOE study “The Macroeconomic Impact of Increasing U.S. LNG Exports” evaluates the economic impact of quantities of LNG exports of 12-20 Bcf/d. The study should not be used in association with the approval of the application request for an increase in export volume of Jordan Cove or any other application.

IECA disagrees with the following major conclusions from the study.

- An increase in LNG exports from the United States will generate small declines in output at the margin for some energy-intensive, trade-exposed industries.
- Negative impacts in energy-intensive sectors are offset by positive impacts elsewhere.

Both of the above study conclusions fail to consider the “relative competitive cost impact” to EITE industries of LNG exports. One study bullet point reads: “In every case, greater LNG exports raise domestic prices and lower prices internationally. The majority of the price movement (in absolute terms) occurs in Asia.” Page 17 of the study says that

LNG exports increasing from 12 Bcf/d to 20 Bcf/d during 2026 and 2040, reduces prices in the Asian-Pacific market by 73 cents per million British thermal units, while increasing U.S. prices by 15 cents per million British thermal units – a combined net negative relative impact to competitiveness of 88 cents, or a 40% equivalent price increase, as compared to current prices. A 40 percent impact to relative competitiveness is a very significant relative competitive cost impact and is not addressed in the study cost impacts.

Page 76 of the study states, “The largest increase in [LNG] exports occurs in the HRR cases, and it is in these cases where we see the largest increase in Henry Hub (topping out at \$0.86 in the late 2030’s) and the largest decrease in JKM (approaching \$5.50 by 2040).” Under this scenario, our global competitors would see a decrease in prices of \$5.50, while U.S. prices would rise \$0.86, for a total negative competitive impact of \$6.36. This would represent a substantial negative impact to U.S. EITE competitiveness. Here again, the study failed to consider the “relative” competitive impact to EITE industries and the manufacturing sector at large.

f. FERC/DOE should not approve LNG export terminals that will not be constructed near-term; otherwise the original “public interest” finding will no longer be valid.

Jordan Cove and all other applications to export are reviewed by the DOE to determine whether an application to export LNG to non-free trade countries is not in the “public interest.” The DOE review process of LNG applications is a “snap-shot” in time analysis of supply, demand, economic impact, among other factors. If an applicant does not build the LNG export terminal right away, the assumptions and findings associated with the public interest determination are no longer valid. Any macroeconomic study covering long-term periods of time, such as 25 years, will be incorrect. Even the Federal Reserve and the EIA forecasts are never remotely correct over long-term periods. The longer the time period the greater the inaccuracy.

It is important to reemphasize that all of the DOE sponsored macroeconomic LNG export studies cite very small economic gains from LNG exports. This provides even more reason for FERC/DOE to ensure that these LNG facilities have firm long-term contracts for 100 percent of capacity to sell LNG and that the facilities are going to be built near-term. If they are not constructed in the near term, FERC/DOE should redo the public interest determination.

The last 18 months have brutally demonstrated that the oil and gas market can and does have significant violent swings. No one predicted the incredible drop in crude oil and natural gas prices and the resulting catastrophic drop in drilling investment in the U.S., which will have a large impact in the future production of natural gas for the next decade or more. The entire restructuring of the oil and gas industry and its economics have changed and the DOE macroeconomic modeling used to originally provide conditional approval of LNG export applications should not be used.

Sincerely,

Paul N. Cicio,
President
Industrial Energy Consumers of America
1776 K Street, NW, Suite 720
Washington, DC 20006
202-223-1661
pcicio@ieca-us.org

June 1, 2016