DEPARTMENT OF ENERGY

10 CFR Part 590

Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC	**FE Docket No. 10-161-LNG**
Lake Charles Exports, LLC	**FE Docket No. 11-59-LNG**
Dominion Cove Point LNG, LP	**FE Docket No. 11-128-LNG**
Carib Energy (USA) LLC	**FE Docket No. 11-141-LNG**
Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC	**FE Docket No. 11-161-LNG**
Cameron LNG, LLC	**FE Docket No. 11-162-LNG**
Gulf Coast LNG Export, LLC	**FE Docket No. 12-05-LNG**
Jordan Cove Energy Project, L.P.	**FE Docket No. 12-32-LNG**
LNG Development Company, LLC (d/b/a Oregon LNG)	**FE Docket No. 12-77-LNG**
Cheniere Marketing, LLC	**FE Docket No. 12-97-LNG**
Southern LNG Company, L.L.C.	**FE Docket No. 12-100-LNG**
Gulf LNG Liquefaction Company, LLC	**FE Docket No. 12-101-LNG**
CE FLNG, LLC	**FE Docket No. 12-123-LNG**
Excelerate Liquefaction Solutions I, LLC	**FE Docket No. 12-146-LNG**
Golden Pass Products LLC	**FE Docket No. 12-156-LNG**

AGENCY: Office of Fossil Energy, Department of Energy.

ACTION: Notice of Availability of 2012 LNG Export Study and Request for Comments.

SUMMARY: The Office of Fossil Energy (FE) of the Department of Energy (DOE) gives notice of the availability of a liquefied natural gas (LNG) export cumulative impact study (LNG Export

Study) in the above-referenced proceedings and invites the submission of initial and reply comments regarding the LNG Export Study. DOE commissioned the LNG Export Study to inform DOE's decisions on applications seeking authorization to export LNG from the lower-48 states to non-free trade agreement (FTA) countries.[1] The LNG Export Study consisted of two parts. The first part, performed by the Energy Information Administration (EIA) and originally published in January 2012, assessed how specified scenarios of increased natural gas exports could affect domestic energy markets. The second part, performed by NERA Economic Consulting (NERA) under contract to DOE, evaluated the macro-economic impact of LNG exports on the U.S. economy using a general equilibrium macroeconomic model of the U.S. economy with an emphasis on the energy sector and natural gas in particular. DOE may use the LNG Export Study to inform its decision in the listed proceedings and for other purposes. Comments submitted in compliance with the instructions in this notice will be placed in the administrative record for all of the above-listed proceedings and need only be submitted once.

DATES: Initial comments are to be filed using procedures detailed in the **Public Comment Procedures** section no later than 4:30 p.m., eastern time, January 24, 2013. Reply comments are to be filed using the same procedures and will be accepted for filing from January 25, 2013, until 4:30 p.m., eastern time, February 25, 2013.

ADDRESSES:

Electronic Filing by email:
LNGStudy@hq.doe.gov

Regular Mail
U.S. Department of Energy (FE-34)
Office of Natural Gas Regulatory Activities
Office of Fossil Energy

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[1] The LNG Export Study did not consider the impact of exports of Alaska natural gas production. Because there is no natural gas pipeline interconnection between Alaska and the lower-48 states, the macroeconomic consequences of exporting LNG from Alaska are likely to be discrete and separate from those of exporting from the lower-48 states.

P.O. Box 44375
Washington, DC 20026-4375

Hand Delivery or Private Delivery Services (e.g., FedEx, UPS, etc.)
U.S. Department of Energy (FE-34)
Office of Natural Gas Regulatory Activities
Office of Fossil Energy
Forrestal Building, Room 3E-042
1000 Independence Avenue, SW
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FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

Background

Pursuant to section 3 of the Natural Gas Act, 15 U.S.C. § 717b, exports of natural gas, including LNG, must be authorized by DOE/FE.[2] Applications that seek authority to export natural gas to countries with which the United States has not entered into a free trade agreement providing for national treatment for trade in natural gas (non-FTA nations) are presumed to be in the public

[2] The authority to regulate the imports and exports of natural gas, including liquefied natural gas, under section 3 of the NGA (15 U.S.C. §717b) has been delegated to the Assistant Secretary for FE in Redelegation Order No. 00-002.04E (issued April 29, 2011)

interest unless, after opportunity for a hearing, DOE finds that the authorizations would not be consistent with the public interest.

On May 20, 2011, in *Sabine Pass Liquefaction, LLC*, Opinion and Order No. 2961 (*Sabine Pass*), DOE issued a conditional authorization to Sabine Pass Liquefaction, LLC for exports to non-FTA nations.[3] Due to its receipt of other applications to export LNG to non-FTA nations, and in anticipation of additional applications, DOE cautioned in Order No. 2961 that it has a continuing duty to monitor supply and demand conditions in the United States in order to ensure that authorizations to export LNG do not subsequently lead to a reduction in the supply of natural gas needed to meet essential domestic needs. Order No. 2961 at 32. DOE further stated that it would evaluate the cumulative impact of the *Sabine Pass* authorization and any future export authorizations when considering subsequent applications for such authority. *Id.*

Like *Sabine Pass*, the 15 proceedings identified above involve applications submitted by the named parties seeking authorization to export LNG from the lower-48 states to non-FTA nations. In response, DOE commissioned a study, consisting of two separate parts, of the economic impacts of granting these types of applications. The purpose of this Notice is to post the LNG Export Study in the 15 proceedings, and to invite initial and reply comments on the LNG Export Study, as applied to the pending matters. The LNG Export Study and the comments that DOE/FE receives in response to this Notice will help to inform our determination of the public interest in each case.

The LNG Export Study

In summary, the LNG Export Study includes:

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[3] On August 7, 2012, DOE/FE issued Order No. 2961-A, a Final Opinion and Order Granting Long-Term Authority to Export LNG from Sabine Pass LNG Terminal to Non-Free Trade Agreement Nations.

- An analysis performed by the Energy Information Administration (EIA) and originally published in January 2012, entitled *Effect of Increased Natural Gas Exports on Domestic Energy Markets* (EIA Study), examining how specified scenarios of increased natural gas exports could affect domestic energy markets.

- An evaluation performed by NERA Economic Consulting (NERA), a private contractor retained by DOE, entitled *Macroeconomic Impacts of Increased LNG Exports from the United States* (NERA Study). The NERA analysis assessed the macroeconomic impact of LNG exports on the U.S. economy using a general equilibrium macroeconomic model of the U.S. economy with an emphasis on the energy sector and natural gas in particular.

The purpose of the LNG Export Study was to evaluate the cumulative economic impact of the *Sabine Pass* authorization and any future requests for authority to export LNG. At the time DOE commissioned the EIA analysis, it had issued the *Sabine Pass* conditional authorization and had received applications for authority to export LNG by vessel from two additional proposed liquefaction facilities. The combined granted and requested authority to export LNG to non-FTA nations at that time was the equivalent of 5.6 billion cubic feet per day (Bcf/day) of natural gas. Additionally, DOE had been contacted by other companies that were considering filing additional applications to export LNG to non-FTA nations in the Fall of 2011. The approximate volume under consideration for export from these companies was equivalent to approximately another 6 Bcf/day of natural gas.

Given the growing interest in exporting LNG from the lower-48 states, DOE designed the scope of the first part of the LNG Export Study, performed by EIA, to understand the implications of additional natural gas demand (as exports) on domestic energy markets under various scenarios. The scenarios established were not forecasts of either the ultimate level, or rates of increase, of exports; instead, these scenarios were established to set a wide range of potential LNG export scenarios, as assessed by DOE at that time.

However, the EIA analysis did not address the macroeconomic impacts of natural gas exports on the U.S. economy. In particular, given its domestic focus, EIA's National Energy

Modeling System does not account for the impact of energy price changes on the global utilization pattern for existing capacity or the siting of new capacity inside or outside of the United States in energy-intensive industries.

Therefore, DOE commissioned NERA to conduct such an analysis. The NERA macroeconomic analysis includes a feasibility analysis of exporting the specified quantities of natural gas used in the EIA analysis, as well as a range of additional global scenarios for natural gas supply and demand, including cases with no export constraints.

The NERA study is available on the DOE/FE website (http://www.fossil.energy.gov/programs/gasregulation/LNGStudy.html). The EIA study remains available on the EIA website (www.eia.gov/analysis/requests/fe). Electronic links to both parts have been posted to the 15 listed dockets.

Key Findings of the NERA Study

The Executive Summary of the NERA Study sets forth several key findings regarding the macroeconomic impacts of permitting exports of LNG from the lower-48 states. DOE does not take a position regarding these findings at this time. However, given the complexity of the NERA Study, and in order to help focus the comments being solicited by this Request, it is worthwhile to set out NERA's key findings *verbatim*. In considering NERA's findings, commenters are urged to keep in mind that the NERA Study was performed by an independent non-governmental organization under contract to DOE and that its findings are NERA's own findings, not those of DOE. The NERA Study's key findings, as presented in the NERA Study's Executive Summary are as follows:

> This report contains an analysis of the impact of exports of LNG on the U.S. economy under a wide range of different assumptions about levels of exports, global market conditions, and the cost of producing natural gas in the U.S. These assumptions were

combined first into a set of scenarios that explored the range of fundamental factors driving natural gas supply and demand. These market scenarios ranged from relatively normal conditions to stress cases with high costs of producing natural gas in the U.S. and exceptionally large demand for U.S. LNG exports in world markets. The economic impacts of different limits on LNG exports were examined under each of the market scenarios. Export limits were set at levels that ranged from zero to unlimited in each of the scenarios.

Across all these scenarios, the U.S. was projected to gain net economic benefits from allowing LNG exports. Moreover, for every one of the market scenarios examined, net economic benefits increased as the level of LNG exports increased. In particular, scenarios with unlimited exports always had higher net economic benefits than corresponding cases with limited exports.

In all of these cases, benefits that come from export expansion more than outweigh the losses from reduced capital and wage income to U.S. consumers, and hence LNG exports have net economic benefits in spite of higher domestic natural gas prices. This is exactly the outcome that economic theory describes when barriers to trade are removed.

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.

U.S. natural gas prices increase when the U.S. exports LNG. But the global market limits how high U.S. natural gas prices can rise under pressure of LNG exports because importers will not purchase U.S. exports if U.S. wellhead price rises above the cost of competing supplies. In particular, the U.S. natural gas price does not become linked to oil prices in any of the cases examined.

Natural gas price changes attributable to LNG exports remain in a relatively narrow range across the entire range of scenarios. Natural gas price increases at the time LNG exports could begin range from zero to $0.33 (2010 $/Mcf). The largest price increases that would be observed after 5 more years of potentially growing exports could range from $0.22 to $1.11 (2010 $/Mcf). The higher end of the range is reached only under conditions of ample U.S. supplies and low domestic natural gas prices, with smaller price increases when U.S. supplies are more costly and domestic prices higher.

How increased LNG exports will affect different socio-economic groups will depend on their income sources. Like other trade measures, LNG exports will cause shifts in industrial output and employment and in sources of income. Overall, both total labor compensation and income from investment are projected to decline, and income to owners of natural gas resources will increase. Different socio-economic groups depend on different sources of

> income, though through retirement savings an increasingly large number of workers share in the benefits of higher income to natural resource companies whose shares they own. Nevertheless, impacts will not be positive for all groups in the economy. Households with income solely from wages or government transfers, in particular, might not participate in these benefits.
>
> Serious competitive impacts are likely to be confined to narrow segments of industry. About 10% of U.S. manufacturing, measured by value of shipments, has both energy expenditures greater than 5% of the value of its output and serious exposure to foreign competition. Employment in industries with these characteristics is about one-half of one percent of total U.S. employment.
>
> LNG exports are not likely to affect the overall level of employment in the U.S. There will be some shifts in the number of workers across industries, with those industries associated with natural gas production and exports attracting workers away from other industries. In no scenario is the shift in employment out of any industry projected to be larger than normal rates of turnover of employees in those industries.
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> NERA Study at 1-2.

Invitation to Comment

DOE invites comments regarding the LNG Export Study that will help to inform DOE in its public interest determinations of the authorizations sought in the 15 pending applications. Comments must be limited to the results and conclusions of these independent analyses on the factors evaluated. These factors include the impact of LNG exports on: domestic energy consumption, production, and prices, and particularly the macroeconomic factors identified in the NERA analysis, including Gross Domestic Product (GDP), welfare analysis, consumption, U.S. economic sector analysis, and U.S. LNG export feasibility analysis, and any other factors included in the analyses. In addition, comments can be directed toward the feasibility of various scenarios used in both analyses. While this invitation to comment covers a broad range of issues, the Department may disregard comments that are not germane to the present inquiry. Moreover, no final decisions will be issued in the 15 pending proceedings until DOE has received and evaluated the comments requested herein.

Public Comment Procedures

DOE is not establishing a new proceeding or docket by today's issuance and the submission of comments in response to this Notice will not make commenters parties to any of the pending 15 cases. Persons with an interest in the outcome of one or more of the 15 pending matters have been given an opportunity to intervene in or protest those pending matters by complying with the procedures established in the respective notices of application issued in the pending 15 matters and published in the Federal Register.[4]

The record in the 15 pending proceedings will include all comments received in response to this Notice. Initial and reply comments will be reviewed on a consolidated basis for purposes of hearing, and decisions will be issued on a case-by-case basis. In addition to the procedures established by this Notice, all comments must meet the applicable requirements of DOE's regulations at 10 C.F.R. part 590. The more specific your comments, the more useful they will be.

Reply comments should be directed toward matters specifically addressed in initial comments and should not introduce new issues not previously raised by other commenters. Reply comments will not be accepted until the opportunity for filing initial comments has run.

Comments may be submitted using one of the following methods: (1) e-mailing the filing to LNGStudy@hq.doe.gov; (2) mailing an original and three paper copies of the filing to the Office

[4] Notices of application in 12 of the pending cases were published in the Federal Register as follows: *Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC*, FE Docket No. 10-161-LNG, 76 FR4885 (January 27, 2011); *Lake Charles Exports, LLC*, FE Docket No. 11-59-LNG, 76 FR 34212 (June 13, 2011); *Dominion Cove Point LNG, LP*, FE Docket No. 11-128-LNG, 76 FR 76698 (December 8, 2011); *Carib Energy (USA) LLC*, FE Docket No. 11-141-LNG, 76 FR 80913 (December 12, 2011); *Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC*, FE Docket No. 11-161-LNG, 77 FR 7568 (February 13, 2012); *Cameron LNG, LLC*, FE Docket No. 11-162-LNG, 77 FR 10732 (February 23, 2012); *Gulf Coast LNG Export, LLC*, FE Docket No. 12-05-LNG, 77 FR 32962 (June 4, 2012); *Jordan Cove Energy Project, L.P.*,FE Docket No. 12-32-LNG, 77 FR 33446 (June 6, 2012); *LNG Development Company, LLC (d/b/a Oregon LNG)*, FE Docket No. 12-77-LNG, 77 FR 55197 (September 7, 2012); Southern LNG Company, L.L.C., FE Docket No. 12-100-LNG, 77 FR 63806 (October 17, 2012); Cheniere Marketing, LLC, FE Docket No. 12-097-LNG, 77 FR 64964 (October 24, 2012); and Gulf LNG Liquefaction Company, LLC FE Docket No. 12-101-LNG, 77 FR 66454, (November 5, 2012). Comments will be received in three other proceedings in which the notices of application were issued by DOE/FE on November 30, 2012, but have not yet posted to the Federal Register, including *CE FLNG, LLC*, FE Docket No. 12-123-LNG; *Excelerate Liquefaction Solutions I, LLC*, FE Docket No. 12-146-LNG; and *Golden Pass Products LLC*, FE Docket No. 12-156-LNG..

of Natural Gas Regulatory Activities at the address listed in **ADDRESSES**; or (3) hand delivering an original and three paper copies of the filing to the Office of Natural Gas Regulatory Activities at the address listed in **ADDRESSES**.

All comments and reply comments submitted in response to this Notice should reference the **"2012 LNG Export Study"** in the title line. Any comments greater than 5 pages, double-spaced, in length must be submitted in electronic format.

The 2012 LNG Export Study is available for inspection and copying in the Office of Natural Gas Regulatory Activities docket room, Room 3E-042, 1000 Independence Avenue, S.W., Washington, DC 20585. The docket room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. All initial and reply comments filed in response to this Notice will be available electronically by going to the following DOE/FE Web address:

http://www.fossil.energy.gov/programs/gasregulation/LNGStudy.html.

Issued in Washington, D.C., on December 5, 2012.

John A. Anderson

John A. Anderson,
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Office of Oil and Gas Global Security and Supply
Office of Fossil Energy