

**UNITED STATES OF AMERICA**

**DEPARTMENT OF ENERGY**

**OFFICE OF FOSSIL ENERGY**

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**SABINE PASS LIQUEFACTION, LLC**

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**FE DOCKET NO. 10-111-LNG**

**OPINION AND ORDER CONDITIONALLY GRANTING  
LONG-TERM AUTHORIZATION TO EXPORT  
LIQUEFIED NATURAL GAS FROM  
SABINE PASS LNG TERMINAL TO  
NON-FREE TRADE AGREEMENT NATIONS**

**DOE/FE ORDER NO. 2961**

**MAY 20, 2011**

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## I. INTRODUCTION

On September 7, 2010, Sabine Pass Liquefaction, LLC (Sabine Pass), a subsidiary of Cheniere Energy, Inc., with its principal place of business in Houston, Texas, filed an application with the Office of Fossil Energy of the Department of Energy (DOE/FE) under section 3 of the Natural Gas Act (NGA)<sup>1</sup> for long-term, multi-contract authorization to export liquefied natural gas (LNG) from the Sabine Pass LNG Terminal, an existing LNG import facility in Cameron Parish, Louisiana. The nature of the requested authorization is further described below. On October 12, 2010, DOE/FE published a Notice of Application in the Federal Register.<sup>2</sup> The Notice called on interested persons to submit comments, protests, and/or motions or notices to intervene no later than December 13, 2010. Subsequently, DOE/FE received seven letters in support of the application, including a late-filed letter from the Governor of Louisiana,<sup>3</sup> and five timely filed motions to intervene. Four of the five motions to intervene took no position regarding the application, whereas the motion to intervene submitted by the Industrial Energy Consumers of America (IECA) opposed a grant of the requested authorization. On December 20, 2010, the applicant filed an answer to the IECA motion to intervene.<sup>4</sup> Also, on March 4, 2011, the American Public Gas Association (APGA) filed a motion for leave to intervene out-of-

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<sup>1</sup> 15 U.S.C. § 717b. This authority is delegated to the Assistant Secretary for Fossil Energy pursuant to Redlegation Order No. 00-002.04D (November 6, 2007).

<sup>2</sup> 75 FR 62512.

<sup>3</sup> The timely filed letters and motions to intervene were granted by procedural order issued December 17, 2010. The late-filed letter from the Governor of Louisiana, filed December 21, 2010, was followed by a motion by counsel for extension of time, filed January 25, 2011. For good cause shown, on March 25, 2011, DOE/FE issued a procedural order granting the counsel's motion for extension of time and accepted the late-filed comments of the Governor for filing.

<sup>4</sup> The submission of the applicant's answer was sanctioned by the December 17, 2010, procedural order.

time and a protest of the application. On March 21, 2011, Sabine Pass filed answers to APGA's motion and protest.<sup>5</sup>

Following a review of the record in this proceeding, DOE/FE has concluded that the opponents of the application have not demonstrated that a conditional grant of the requested authorization for a term of 20 years would be inconsistent with the public interest. DOE/FE accordingly will grant the requested authorization subject to the terms and conditions set forth below.

## **II. DESCRIPTION OF REQUEST**

Sabine Pass has applied for a long-term, multi-contract authorization to export up to the equivalent of 16 million metric tons per annum (mtpa) of LNG (equivalent to approximately 803 billion cubic feet per year, or 2.2 billion cubic feet per day [Bcf/d] of natural gas) by vessel from the Sabine Pass LNG Terminal for a 20-year term. Sabine Pass requests that its authorization commence on the earlier of the date of first export or five years from the date of the issuance of the authorization. Sabine Pass seeks to export this LNG to any country: (1) with which the United States does not have a free trade agreement (FTA) requiring the national treatment for trade in natural gas and LNG; (2) that currently has or in the future develops the capacity to import LNG; and (3) with which trade is not prohibited by United States law or policy.<sup>6</sup>

Sabine Pass states that this application for export authorization is the second phase of a two-phased export authorization request. Sabine Pass filed the first phase of the application seeking authorization to export domestically produced LNG to countries with which the United

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<sup>5</sup> In its March 25, 2011 order, DOE/FE denied APGA's motion for leave to intervene out-of-time but agreed to treat the arguments raised in APGA's protest as non-intervener comments.

<sup>6</sup> Currently the United States has FTAs requiring national treatment for trade in natural gas and LNG with the following countries: Australia, Bahrain, Singapore, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Chile, Morocco, Canada, Mexico, Oman, Peru, and Jordan.

States does have an FTA calling for the national treatment for trade in natural gas on August 11, 2010. In DOE/FE Order No. 2833, issued September 7, 2010, DOE granted the first-phase application.<sup>7</sup>

Sabine Pass is seeking the two-phased export authorization in conjunction with its development of the Sabine Pass Liquefaction Project (Project). Sabine Pass asserts that the Project, currently under review by the Federal Energy Regulatory Commission (FERC),<sup>8</sup> is being developed to enable Sabine Pass to liquefy domestic supplies of natural gas for export to foreign markets. Sabine Pass states that natural gas will be liquefied and stored in the existing LNG storage tanks at the site, and further that LNG will be exported from the Sabine Pass LNG Terminal via LNG carriers that will arrive at the site by marine transit through the Sabine River Navigation Channel. Sabine Pass also states that this enhanced facility will be operated as the first LNG facility in the world designed to be a bidirectional terminal (i.e., have the capability both to liquefy natural gas for export, and to import and regasify LNG simultaneously). Sabine Pass further states that this dual capability will not result in an increase in the number of ship transits<sup>9</sup> since the total amount of LNG processed either by liquefying natural gas or vaporizing LNG will not exceed an average of 4.0 Bcf/d. Because of the pendency of the FERC's environmental review of the Project, Sabine Pass requests that, pursuant to section 590.402 of

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<sup>7</sup> Whereas the first-phase authorization to export to FTA nations granted in Order No. 2833 was for a term of 30 years commencing on the date of first export, with such first export to occur no later than ten years following issuance of the authorization, the authority to export to non-FTA nations requested in this second-phase application is for a term of 20 years to commence on the earlier of the date of first export or five years from the date of the issuance of the authorization.

<sup>8</sup> On August 4, 2010, the Director of the Office of Energy Projects of the Federal Energy Regulatory Commission (Commission) issued a letter order in Docket No. PF10-24-000 granting Sabine Pass' request to commence the Commission's mandatory National Environmental Policy Act (NEPA) pre-filing review process for the Sabine Pass Liquefaction Project. The potential environmental impact of the Sabine Pass Liquefaction Project will be reviewed by the Commission in conjunction with this proceeding. DOE/FE is a cooperating agency in that review process.

<sup>9</sup> Sabine Pass states the Sabine Pass LNG terminal is capable of unloading approximately 400 ships per year, or an average of just over one ship every day.

DOE's regulations (10 CFR 590.402), DOE/FE issue a conditional order granting the requested export authorization conditioned on completion of FERC's environmental review.

Sabine Pass proposes to export LNG on its own behalf or as agent for others. It intends in most instances to take title to gas at a point upstream of the Sabine Pass LNG Terminal and, once the gas has been processed, to transfer title back to the customer at the outlet of the Project at the flange of the LNG vessel as the LNG is loaded for export. However, Sabine Pass states that in other instances, the customer will retain title as the gas is processed and exported. In the latter instance, Sabine Pass will not hold title to the gas at the time of export.

Sabine Pass states that it will conduct its business using long-term LNG Processing Service (LPS) agreements and does not contemplate entering into any long-term gas supply or export contracts. These LPS agreements will grant to each customer, on a monthly basis, the right to make nominations to: (1) liquefy and load cargoes for export; (2) nominate the delivery of cargoes for import and regasification; or (3) elect not to load any cargoes. Sabine Pass states that the LPS agreements will fill the role traditionally served by long-term supply agreements insofar as they will demonstrate the security of the supply underlying a request for long-term export authorization. Sabine Pass accordingly seeks a waiver of the filing requirements of section 590.202(b) of DOE's regulations (10 CFR 590.202(b)) to the extent the regulations require information regarding the source and security of the natural gas supply to be exported and other transaction-specific information. A waiver is appropriate, according to Sabine Pass, because "the market for natural gas supplies in the United States is vast and liquid" and current market conditions and practices have "evolved to a point where buyers and sellers no longer enter into the types of long-term gas purchase and sales arrangements that were common at the time the DOE regulations requiring the filing of transaction-specific information were

promulgated.”<sup>10</sup> In lieu of filing supply agreements, Sabine Pass proposes that it be permitted to file the long-term LPS agreements that are the subject of the application following execution of such agreements, which has yet to occur.<sup>11</sup>

Sabine Pass further states that the gas supply underlying these LPS agreements will be delivered to the Sabine Pass LNG Terminal from the interstate natural gas pipeline grid at different liquidity points. Sabine Pass states that natural gas could be sourced from any point in the U.S. interstate pipeline system, but the most likely sources of natural gas will be the historically prolific South, East, and Gulf Coast Texas onshore gas fields, the gas fields in the Permian, Anadarko, and Hugoton basins, and the unconventional gas fields in the Barnett, Haynesville, Eagle Ford, Fayetteville, Woodford, and Bossier basins. Sabine Pass states this supply can be sourced in large volumes in the spot markets or pursuant to long-term arrangements, for the account of Sabine Pass or third party customers.

### **III. APPLICANT’S PUBLIC INTEREST ANALYSIS<sup>12</sup>**

Sabine Pass states that granting the requested long-term, multi-contract export authorization is not inconsistent with the public interest. Sabine Pass asserts that natural gas production in the United States has been steadily rising in recent years and this has resulted in low market prices to the point that producers have deferred completion of drilled wells;

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<sup>10</sup>Application at 14. Pursuant to Executive Order 13563, issued by the President on January 18, 2011, DOE/FE is conducting a review of its current regulations, including whether the regulations should be updated.

<sup>11</sup> Sabine Pass states that the terms of the individual contracts, including, but not limited to, commencement and termination dates, pricing, volumes, and export destinations will vary and be determined by market conditions. Sabine Pass states that in certain instances, the country of destination may not be specified in the contract itself in order to allow maximum commercial flexibility. Sabine Pass asserts, however, that in such instances, the contract will explicitly provide that such export destination will be within the scope of the export authorization granted to Sabine Pass by DOE, and that the destination countries will be reported to DOE in the monthly reports filed by Sabine Pass.

<sup>12</sup> Sabine Pass contends that its application should be reviewed under section 3(c) of the Natural Gas Act, 15 USC 717b(c). On October 21, 2010, DOE/FE issued an order which rejected Sabine Pass’ argument and found that the application should be reviewed under section 3(a) of the Act, 15 USC 717b(a). Section 3(a) requires DOE/FE to complete a public interest review of the pending application.

periodically shut-in actively producing wells in marginal fields; and shelved plans for future investment in producing basins. Sabine Pass contends that the ability to export natural gas as LNG will greatly expand the market scope and access for domestic natural gas producers and thus serve to encourage domestic production when low domestic gas prices might not otherwise do so. Sabine Pass notes that the flexibility offered to capacity holders in the Project will allow them to reduce their export nominations if market prices indicate that the natural gas is needed in the United States during times of domestic need. This flexibility, according to Sabine Pass, would help to moderate U.S. gas price volatility and keep prices to domestic consumers at reasonable levels both during periods of weak domestic demand and periods of high domestic demand. Sabine Pass contends also that a grant of the application will yield several tangible benefits to the State of Louisiana, the Gulf Coast region, and the broader interest of the United States, including but not limited to:

- Stimulate the Louisiana state, regional, and national economies through job creation, increased economic activity, and tax revenues, including creation or continuation of approximately 3,000 engineering and construction jobs during the design and construction of the Project (which translates into approximately \$1 billion in wages to United States workers over a six-year period); an estimated 150 to 250 full-time positions that will be required to operate and maintain the Project; plus indirectly, 30,000 to 50,000 permanent jobs in the exploration and production sector;
- Promote domestic production of petroleum and reduced reliance on foreign sources of oil;
- Further the National Export Initiative (NEI), established by a March 11, 2010, Executive Order to reduce barriers to trade and promote U.S. exports<sup>13</sup> by improving United States balance of payments, through the exportation of approximately 2 Bcf/d of natural gas valued at approximately \$5 billion and the displacement of \$1.7 billion in LNG imports;

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<sup>13</sup> *Citing* to Executive Order – National Export Initiative (March 11, 2010), at <http://www.whitehouse.gov/the-press-office/executive-order-national-export-initiative>.

- Raise domestic natural gas productive capacity and promote stability in domestic natural gas pricing;
- Promote the liberalization of global natural gas trade through the fostering of a global, liquid, natural gas market;
- Advance national energy security and the interests of the United States' trading partners through diversification of global natural gas supplies; and
- Increase economic trade and ties with foreign nations, including neighboring trade partners in the Americas, and displace environmentally damaging fuels in those countries.

In further support of the application, Sabine Pass addressed the question of the domestic need for the gas to be exported; the volume of domestic supplies; and the likely impact of the proposed exports on natural gas prices. To this end, it commissioned reports by Advanced Resources International (ARI) and Navigant Consulting, Inc. (NCI). ARI provided two reports. The first ARI report, *U.S. Natural Gas Resources and Productive Capacity* (ARI Resource Report), evaluated the scope of natural gas resources in the United States and their potential for future recovery. The second ARI report, entitled *Domestic Hydrocarbon Liquids Production from Gas Shales and Other Unconventional Gas Resources* (ARI Liquids Report), evaluated the potential increase in petroleum liquids production associated with certain unconventional formations due to the Sabine Pass Project. The NCI report, *Market Analysis for Sabine Pass LNG Export Project* (NCI Report), evaluated the market price impact of LNG exports from the Project under several regulatory scenarios.

According to the applicant, the ARI Resource Report and the NCI Report, as well as publicly available information, indicate that the United States has significant natural gas resources available at prices that are sufficient to meet projected domestic needs and 16 mtpa of exports over the 20-year period covered in the application. In this regard, Sabine Pass contends

that the Project is in the public interest because it: (1) does not impinge on domestic needs for natural gas; and (2) supports and encourages the continued development of natural gas resources during times when domestic prices of natural gas are depressed, thereby ensuring that domestic supplies will be available throughout demand cycles.

According to Sabine Pass, DOE/FE should evaluate domestic need from a national perspective because the location of the Project in southwest Louisiana is at a transit point linking major supply basins to most consuming regions. Sabine Pass points to data from several sources that allegedly show an increase in domestic productivity in the past, and projects a continuing run-up in domestic reserves in the future. According to Sabine Pass, these include:

- The Energy Information Administration (EIA), an independent agency within DOE: EIA data show that despite a drop in drilling activity from peak levels in 2008, natural gas production grew 16.1 percent from 2005 to 2009; and EIA has estimated that the growth in domestic production is likely to continue.
- The Potential Gas Committee of the Colorado School of Mines (PGC): In June 2009, the PGC raised its estimates of the U.S. technically recoverable resource base by 515 trillion cubic feet (Tcf) (39 percent) to 1,836 Tcf at year end 2008; including 238 Tcf of proved reserves, PGC also determined that the United States possesses a future available gas supply of 2,074 Tcf, sufficient to meet domestic market needs for over 90 years based on 2009 consumption levels.
- The Massachusetts Institute of Technology (MIT): In a 2010 report entitled *The Future of Natural Gas, Interim Report*, MIT estimated that the United States has a mean recoverable resource base of approximately 2,100 Tcf; and MIT projected that United States gas production will rise by 40 percent between 2005 and 2050.
- The ARI Resource Report: This Report estimates that the United States possesses technically recoverable natural gas resources of 2,585 Tcf, including 2,286 Tcf in the Lower 48 and 299 Tcf in Alaska. Of this total, 246 Tcf represents proved natural gas reserves, and 2,238 Tcf comprises undiscovered or inferred resources. This Report asserts that increases in recoverable resources and reductions in unit costs have been (and in the future will continue to be) driven by technology improvements such as horizontal drilling, multi-well pad drilling, and improved fracturing and stimulation of tight gas formations. According to Sabine Pass, ARI also estimates that recoverable domestic shale gas resources will increase by 18.9

percent (from 711 Tcf to 853 Tcf) from 2009 to 2035, a time span that matches the time period of the requested export authorization.

While estimates of potential production of natural gas in the United States continue to increase, Sabine Pass points to additional data from the EIA and other public sources reflecting a decline in demand for natural gas throughout the economy. In particular, Sabine Pass points to the EIA's August 10, 2010, short-term market assessment that predicts that domestic natural gas consumption has grown only 7.6 percent since 1998; this, according to Sabine Pass, contrasts with a 1999 prediction by the National Petroleum Council (NPC) that gas consumption would grow 31.8 percent from 1999 to 2010. Additionally, Sabine Pass refers to EIA data that shows that the volume of domestic gas consumption in 2009 (22.81 Tcf) was actually 2.2 percent lower than the volume (23.33 Tcf) consumed at the start of the decade; and to EIA data in the *Annual Energy Outlook 2010 (AEO 2010)* which estimates that annual domestic gas demand will grow only 0.2 percent to reach 24.86 Tcf in 2035.

Sabine Pass further analyzes this modest level of growth by various sectors of the domestic economy, and asserts the following:

- **Industrial Sector:** EIA has found that consumption of natural gas declined over the last decade from a peak of 8.51 Tcf to 6.14 Tcf in 2009; and EIA projects that industrial sector demand of 6.65 Tcf in 2008 will remain relatively flat to 2035 when it is projected to be 6.72 Tcf.
- **Residential and Commercial Sectors:** EIA has shown that gas demand per household has been declining since the 1990's and was down 22 percent from 1990 to 2009; and EIA has forecasted in effect no growth in future residential sector consumption from 2008 to 2035. Similarly, natural gas use in the commercial sector is projected to experience only modest growth of 0.6 percent from 2008 to 2035.
- **Electricity Sector:** The electric generating sector is the only domestic natural gas consuming sector of the economy to experience consistent growth in recent years; there has, in fact, been a 32.3 percent uptick (5.21 Tcf to 6.89 Tcf) in natural gas consumption from 2000 to 2009. However, future projections of growth are

uncertain due primarily to economic effects of the U.S. recession and increased competition from other sources of generation, and growth could be influenced by a variety of factors, particularly the impact of regulations to control greenhouse gas (GHG) emissions.

- Transportation Sector: The transportation sector accounts for a small portion of domestic natural gas demand (0.1 percent, or 28.2 Bcf, in 2008) but the EIA, in *AEO 2010*, projected that this small base is likely to grow 5.9 percent annually to 0.19 Tcf in 2035.

Besides relying on publicly available data, Sabine Pass supports its contention that the proposed export is in the public interest on the basis of the NCI Report. The NCI Report contains two analyses of future natural gas demand—one assumes that existing energy and environmental laws affecting natural gas usage are not changed, while the other assumes that regulations and policies aimed at reducing greenhouse gas (GHG) emissions and promoting the future use of natural gas are implemented. The NCI Report assumes that the Alaska Gas Pipeline project will be online in 2025 with transportation volumes of 4.5 Bcf/d.

The first of the NCI analyses is termed the “GHG As Is Case,” while the second is termed the “GHG Plus Case.” From these two “cases,” NCI develops five possible scenarios, including:

- GHG As Is Case
- GHG As Is “Moderate Export” Case—assumes exports of 1.0 Bcf/d from the Project beginning in 2015
- GHG As Is “High Export” Case—assumes exports of 2.0 Bcf/d from the Project beginning in 2015
- GHG Plus Case—assumes the adoption of a carbon tax and incentives to foster the conversion of heavy duty trucks to natural gas vehicles and expanded construction of a natural gas fueling infrastructure
- GHG Plus “High Export” Case—same as GHG Plus Case but also assumes exports of 2.0 Bcf/d from the Project beginning in 2015

The above scenarios yield the following projections drawn from the NCI Report for aggregate domestic natural gas consumption and natural gas prices (at the Henry Hub) covering the 20-year term of the proposed authorization (2015 – 2035):

	<u>Domestic Consumption</u> (Bcf/d)		<u>Henry Hub Price</u> (\$/MMBtu)	
	<u>2015</u>	<u>2035</u>	<u>2015</u>	<u>2035</u>
<b>As Is Case</b>	60.2	68.9	\$3.29	\$6.97
<b>As Is Moderate Exports Case</b>	60.1	68.9	3.49	7.20
<b>As Is High Exports Case</b>	60.1	69.0	3.64	7.46
<b>Plus Case</b>	67.5	83.1	4.50	11.43
<b>Plus High Export Case</b>	67.3	82.7	5.02	12.33

The NCI Report, on the basis of the above data, concludes that the addition of LNG export capability would have a “fairly moderate impact on prices in the market.”<sup>14</sup> According to the NCI Report, compared to the GHG As-Is Case, the addition of 2.0 Bcf/d of LNG exports will increase prices by \$0.35 per million British thermal units (MMBtu) (10.6%) in 2015 and by \$0.49/MMBtu (7.0%) in 2035. Compared to the GHG Plus Case, the NCI Report indicates that the addition of 2.0 Bcf/d of LNG exports will increase natural gas prices by \$0.52/MMBtu (11.6%) in 2015 and by \$0.90/MMBtu (7.9%) in 2035. Appendix A to this Order presents additional relevant detail.

To meet the increased supply associated with LNG exports, the NCI Report reflects a complex interaction between increased domestic production and changes in Canadian pipeline imports and LNG imports. For example, in the GHG As-Is High Export Case in 2035, the

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<sup>14</sup> NCI Report at 3.

addition of 2.0 Bcf/d of exports at Sabine Pass increases domestic production by 1.4 Bcf/d, net pipeline imports by 0.3 Bcf/d, and 0.3 Bcf/d of LNG imports, compared to the GHG As-Is Case.

In all cases, growth in both domestic shale gas supplies and some level of LNG imports continues to be shown in the NCI model results. For example, in the GHG As-Is Case, shale gas supply grows from 18.9 Bcf/d in 2015 to 29.4 Bcf/d in 2035, while LNG imports rise to “3.7 Bcf/d by 2035, as it is able to compete on price at the margin with domestic production.”<sup>15</sup>

The NCI Report also projects price changes over the likely term of the requested authorization (to 2035). A projected increase of 14.2 Bcf/d in consumption in the 2035 GHG Plus Case compared to the 2035 GHG As-Is Case causes the NCI model’s Henry Hub price to increase from \$6.97/MMBtu to \$11.43/MMBtu. This projected increase in market price of \$4.46/MMBtu represents a price increase of \$0.314/MMBtu for each 1.0 Bcf/d of incremental consumption.

In addition to examining the domestic market price impact of the anticipated exports, the NCI Report reviewed the anticipated impact on prices specifically in the Northeast market region of the United States. The NCI Report states that their “findings were that none of the export scenarios have a significant impact on Northeast market prices relative to prices in the Gulf Coast region.”<sup>16</sup> In other words, the Northeast would see similar, but slightly less, price increases as the Henry Hub price increases from the LNG exports.<sup>17</sup>

In its application, Sabine Pass contends that the actual price impact of its proposed exports is likely to be smaller than represented in the NCI Report because the Report assumes 100 percent utilization rates, whereas export activity will be phased-in over a three year period

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<sup>15</sup> NCI Report at 19.

<sup>16</sup> *Id.* at 4.

<sup>17</sup> *Id.* at 34.

during which the facility will not be run at full capacity; export activity may fall or even cease altogether from time to time (e.g., if the liquefaction units are “down” due to normal seasonal maintenance or if market conditions render exports unprofitable), and the assumptions used by NCI for future domestic resource recovery are conservative.

Sabine Pass also contends that the ARI Resource Report provides additional evidence that domestic natural gas resources will exceed future domestic needs. The ARI Resource Report contains projections of natural gas productive capacity to 2035, which is ARI’s estimate of the volume of production at the *AEO 2010* Reference Case Henry Hub price track in 2008 \$/MMBtu (e.g., \$6.64/MMBtu in 2020 and \$8.88/MMBtu in 2035). The unconventional gas projections are based on ARI’s internal database and supply model while the conventional gas projections are taken from EIA’s *AEO 2010* Reference Case.<sup>18</sup>

ARI projects that, due almost entirely to gas shale production, domestic unconventional natural gas productive capacity will increase from 36 Bcf/d today to 49 Bcf/d by 2020. ARI further projects that unconventional gas shale productive capacity will increase to 69 Bcf/d by 2035; about half of this increase in unconventional gas productive capacity is expected to occur in the Mid-Continent/Gulf Coast Corridor accessible to Sabine Pass’ Project. According to Sabine Pass, when these projections for increased unconventional productive capacity are combined with EIA’s projections for conventional gas in *AEO 2010*, the overall natural gas productive capacity is projected to reach nearly 93 Bcf/d in 2035, up from about 59 Bcf/d today. Sabine Pass notes that the nearly 93 Bcf/d estimate for 2035 in the ARI Resource Report is well

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<sup>18</sup> ARI uses its own estimates for unconventional natural gas productive capacity rather than EIA’s estimates of actual production from unconventional sources. ARI Resource Report at 29. In particular, ARI calculates 700 Tcf of technically recoverable resources from gas shale, a figure which is 404 Tcf larger than EIA’s estimate. ARI Resource Report at 30.

in excess of EIA's estimate of domestic natural gas supply for 2035 of 68.1 Bcf/d.<sup>19</sup> Moreover, Sabine Pass contends that: "Under the modified supply case presented by ARI, domestic natural gas productive capacity would exceed projected U.S. demand by 11.0 Bcf/d in 2015, 19.9 Bcf/d in 2025, and 28.7 Bcf/d in 2035, assuming timely completion of the North Slope pipeline to the Lower 48."<sup>20</sup> Even assuming that the Alaska pipeline is delayed or cancelled, Sabine Pass states that the ARI Resource Report demonstrates that surplus domestic natural gas capacity would "well exceed" the 16 mtpa covered by the application for potential export.

Sabine Pass identifies a number of factors that are intended to demonstrate why the NCI Report and the ARI Resource Report present two different estimates of future domestic natural gas supplies. These include differences in modeling price-responsive supply, and different assumptions about the future productivity of natural gas exploration and development. Most significantly, according to Sabine Pass, both reports have concluded that the potential for future recovery of domestic gas production is "more robust" than presented in EIA forecasts and both reports find that domestic natural gas resources are sufficient to meet all future demand scenarios under consideration and, therefore, the exporting of up to 2 Bcf/d proposed in the application will not be inconsistent with the public interest.<sup>21</sup>

In addition to the benefits listed above, Sabine Pass identifies a number of additional benefits to national, regional, and local economies that it claims also support a finding that a grant of the requested authorization would be in the public interest. These include:

- Manufacturing and supply of the required materials for the Project will result in an investment of over \$400 million per LNG train, which equates to over \$1.6 billion in domestic sourced materials.

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<sup>19</sup> Application at 52.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* at 53.

- The Project will directly stimulate southern Louisiana, particularly Cameron Parish; these are areas that were “decimated” by Hurricanes Ike and Rita.
- The Project will also benefit other areas of Louisiana and the Gulf Coast that have been hard hit by the prevailing deepwater drilling moratorium in the Gulf of Mexico.
- The Project, once operational, will generate significant tax revenues.
- The national economy will benefit indirectly from the Project’s role in supporting natural gas exploration and production.
- The Project indirectly will have a “profound multiplier effect” due to the wages, taxes, royalty, and lease payments in the natural gas supply chain.

Sabine Pass further contends that a grant of the application is supported by national policies in favor of free trade; will yield a significant benefit by leveling the United States’ balance of payments and reducing the nation’s trade deficit by an estimated \$6.7 billion; will enhance the diversity of global natural gas supply and contribute to the security interests of the United States and its allies; and will advance the current Administration’s initiatives to promote investment in energy infrastructure in neighboring Caribbean and Central/South America nations. Other geopolitical benefits identified by Sabine Pass in connection with the export of domestically produced LNG include liberalization of the global gas market through increased liquidity and trade at prices established by market forces; advancement of national security interests and the security interests of the nation’s allies through the diversification of global natural gas supplies; and, by introducing market-based price structures, an increased potential for global decoupling of the link between the pricing of natural gas and competing crude oil products in international markets.

#### **IV. MOTIONS TO INTERVENE, COMMENTS, AND PROTESTS**

As noted above, DOE/FE received seven letters in support of the application and five timely filed motions to intervene. The letters in support of the application were submitted by Stephen Moret, Secretary of the State of Louisiana; Chris John, President of the Louisiana Mid-Continent Oil and Gas Association; Randy Eresman, President and Chief Executive Officer of Encana Corporation; Kenneth D. McClintock, Secretary of State of the Government of Puerto Rico; James C. Johnson, Senior Vice-President—Marketing, Chesapeake Energy Corporation; Senators James Inhofe and Mary Landrieu and Representatives Dan Boren and Charles Boustany along with other Members of Congress; and Bobby Jindal, Governor of Louisiana to President Obama. In addition to these non-party commenters, the following parties submitted timely filed motions to intervene in this proceeding—Shell US Gas & Power; Macquarie Energy LLC; Freeport LNG Development, L.P.; Marathon Oil Company; and Industrial Energy Consumers of America.

##### **A. Non-Intervener Letters In Support of the Application**

The non-intervener letters submitted in support of the application largely focus on benefits that the commenters anticipate from a grant of the requested authorization. Mr. Moret, on behalf of the State of Louisiana, for example, maintains that a grant of the application will generate significant new employment and capital expenditures to an area that has yet to fully recover from Hurricanes Rita and Ike and will provide demand for the unconventional gas that is being produced in the northern part of Louisiana, thus retaining jobs and sustaining investment in the natural gas production sectors.

The Louisiana Mid-Continent Oil and Gas Association states that recent shale gas developments have enabled the United States to partner with other nations by exporting natural

gas; that there is no other export-ready facility in the lower-48 states; and that the requested export authorization represents a unique opportunity to allow a small percentage of production of natural gas across the country to be exported, thereby sustaining 30,000-50,000 production and 1,800 construction jobs, significantly impacting the balance of trade, and providing a lower emissions energy source globally.

Encana points out that the instant case is the first in the modern era in which DOE/FE is being asked to address the question of whether the supply needs of American consumers in the lower-48 states generally can be adequately protected if the markets to which domestically produced gas can be exported are expanded to include non-FTA countries that can only be reached via the worldwide LNG trade. Encana submits that DOE/FE should answer this question in the affirmative. Encana maintains that allowing Sabine Pass to open the door to new markets will have a salutary effect on domestic natural gas development efforts. As a natural gas producer, Encana states that it is interested in exploring the potential LNG export market as one of many market options for its North American production. Encana, like the applicant, asserts that a grant of the application will lead to new job creation and associated economic benefits for the communities surrounding the affected producing basins. Encana maintains that the U.S. and North American natural gas markets have reached a state of maturity where there should be little fear on the part of regulators that the needs of U.S. consumers will be compromised if market access is not artificially restricted. According to Encana, reserve studies show that gas supplies are available from a variety of sources to meet U.S. needs for natural gas for the foreseeable future – certainly during the 20-year proposed term of the requested export authorization. The only real question, Encana states, is from which sources and in what proportions this natural gas will come, and Encana argues that should be determined primarily by economic forces.

Mr. McClintock, representing Puerto Rico, emphasizes how the application furthers the NEI and also the potential for job creation as a result of granting the application. Although Puerto Rico is not an export destination, Mr. McClintock states that it could potentially benefit by opening the natural gas market to United States-sourced LNG indexed to Henry Hub/NYMEX prices.

The other non-intervener letters filed in support of the application largely restate claims contained in the application and in the other letters in support, as summarized above, regarding the potential benefits that would allegedly follow upon a grant of the application.

**B. Timely Filed Motions to Intervene**

Of the five timely filed motions to intervene in this proceeding, four did not set forth a position regarding the merits of the application. The timely filed motion to intervene submitted by IECA, on the other hand, opposes the application.

IECA states that it is a nonpartisan association of leading manufacturing companies with \$800 billion in annual sales and with more than 750,000 employees nationwide and that its purpose is to promote the interests of manufacturing companies for which the availability of energy, power, or feedstock play a significant role in their ability to compete in domestic and world markets.

IECA contends that permitting exports of natural gas will drive up domestic demand and domestic prices for the manufacturing sector and the public. This is not in the public interest, according to IECA. IECA points out that the manufacturing sector has lost 5.4 million jobs since 2000 and most of these job losses were the result of lack of competitiveness because of higher costs, including significant increases in the price of natural gas and impacts on the price of electricity from 2000 to 2008. IECA recognizes that natural gas reserves have increased, but

observes that there are important uncertainties that can delay or stop drilling in portions of the country, thereby reducing supply and increasing natural gas prices. These uncertainties identified by IECA include regulatory issues regarding the hydraulic fracturing (fracking) process, questions surrounding access to onshore lands (including federal lands), the stringency of regulations for offshore drilling, offshore moratoria, and issues involving natural gas liquids.

IECA maintains:

The most important uncertainty is what price for natural gas will be necessary to bring shale natural gas reserves to market given these uncertainties. It is not enough to know that the US has significant reserves of natural gas. The question remains, what portion of those reserves can be produced at affordable prices and especially at prices that allow the manufacturing sector to flourish.<sup>22</sup>

In addition to the potential impact on domestic prices, IECA is concerned that exporting natural gas will reduce United States energy security. IECA contends that the volume of natural gas that would be authorized for export if the application is granted is a significant portion of annual domestic consumption—

The Application requests approval to export as much as .803 trillion cubic feet of natural gas per year for a 20 year period. This is a significant amount of natural gas and is equivalent to 3.54 percent of 2009 US demand; 13.4 percent of industrial demand; 17.1 percent of residential demand and 11.5 percent of electric sector demand. A[n] annual average increase in demand of 3.5 percent could have the effect of pushing prices up for everyone.<sup>23</sup>

IECA contends that the 20-year term requested by Sabine Pass is not in the public interest or the interest of the manufacturing sector:

A 20 year period is a significantly long time and raises concerns given the history of natural gas prices in the last ten years. From 2000 to 2008 we saw prices rise from the \$4.00 per Btu range to the \$14.00 Btu range. Just because we have prices in the mid \$4.00 range today does not mean these lower prices will remain at these affordable levels. The federal government has the responsibility to error [sic] on the side of caution.<sup>24</sup>

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<sup>22</sup> IECA motion to intervene at 2.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

IECA also rejects Sabine Pass' argument that approval of the application furthers the public interest by promoting "liberalization of the global natural gas market by fostering increased liquidity and trade at prices established by market forces." IECA states that Sabine Pass essentially is seeking to link the domestic price of natural gas to global prices:

This is what crude oil does today. The problem is that when tight supply occurs, and it always does, increased demand from other places in the world will have the result of increasing the price of natural gas for everyone in the US.... [T]his is not a benefit to the US. We are currently benefitting from the increased regional supply in the US and Canada. For now, so long as domestic supplies continue to meet demand at affordable prices, regional prices (US and Canada) promise to be lower than global prices.<sup>25</sup>

IECA stresses that manufacturers, home owners, and farmers depend on affordable and reliable natural gas service and do not have the ability to substitute another fuel to meet their needs. IECA accordingly urges that DOE/FE give a priority to the needs of domestic consumers in its review of the application.

### **C. APGA's Motion to Intervene Out of Time and Protest**

As noted previously, on March 25, 2011, DOE/FE issued a procedural order denying APGA's March 4, 2011, motion to intervene out-of-time. APGA consequently is not a party to this proceeding. Nevertheless, given the precedential nature of this proceeding<sup>26</sup> and in order to ensure a complete evaluation of all relevant argument and evidence, DOE/FE has reviewed APGA's March 4 submission and Sabine Pass' response.<sup>27</sup>

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<sup>25</sup> *Id.* at 3.

<sup>26</sup> This is the first application the Department has received requesting long-term (greater than 2 years) authority to export U.S. lower-48 domestically produced natural gas as LNG to non-free trade agreement countries. It is also the first application seeking to export LNG by vessel associated with construction of liquefaction capacity.

<sup>27</sup> We note that Sabine Pass, having responded to the merits of APGA's protest in Sabine Pass' March 21, 2011, answer, will not be unfairly prejudiced by our consideration of the substantive arguments contained in the protest. We note also that, on March 31, 2011, APGA submitted additional unsolicited comments in this proceeding; the arguments contained in the March 31 filing have been factored into our discussion and conclusions presented herein.

APGA contends that exportation of substantial quantities of natural gas may have significant adverse implications for domestic natural gas consumers, for domestic energy supply, and national security and, therefore, is inconsistent with the public interest and should be denied. According to APGA, the export of natural gas is inconsistent with a policy of energy independence. APGA observes that the current availability of secure and affordable domestically produced natural gas has created “a previously unimaginable opportunity” for United States energy independence that should not be missed and that the use of natural gas should be maximized domestically to displace imported petroleum and coal. This includes, in APGA’s view, the replacement of current gasoline-powered fleet and passenger vehicles with natural gas-powered vehicles. APGA submits that such an approach would enhance United States security and strategic interests while exporting natural gas will tie domestic natural gas prices to international gas markets that oftentimes have higher and less stable commodity prices. In this regard, APGA challenges Sabine Pass’ assertion that the introduction of domestically produced LNG into international markets will help European and Asian markets become more liquid and less sensitive to fluctuations in the price of oil:

Sabine Pass overstates the ability of U.S. exports to transform global markets. The amount of natural gas proposed to be exported from the U.S., while significant on the domestic scale, would be a proverbial “drop in the bucket” compared to global natural gas consumption. Since international markets are often less liquid, less transparent and less competitive, divided by national boundaries, and natural gas commodity price [sic] are often indexed to crude oil, it seems far more likely that exporting natural gas from the United States would tie domestic commodity prices to international fluctuations rather than tame international fluctuations.<sup>28</sup>

As an example, APGA points to press reports that Sabine Pass is negotiating with Enel Trade, an Italian concern, to supply it with exported LNG. Sabine Pass notes Italy’s dependence

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<sup>28</sup> APGA motion to intervene at 6.

on natural gas supplies from Libya for approximately 12 percent of Italy's natural gas and contends that:

It is unrealistic to think that U.S. LNG exports could significantly dampen the impact of current events in Libya on Italian energy markets, let alone broader global markets. Meanwhile, exports would tie U.S. natural gas prices to events abroad, which can dramatically affect demand and price.<sup>29</sup>

APGA also asserts that Sabine Pass ignores the fact that the domestic natural gas market currently is competitive, liquid, and transparent, and that it is:

less susceptible to unstable regimes, rapacious cartels, and distant events than the global oil market to which the foreign gas market is tied. At present, the US natural gas market benefits from the security and stability in North America. United States policymakers should preserve and capitalize on our natural gas windfall rather than undermine the stability of domestic commodity markets.

Sabine Pass' major complaint with the domestic natural gas market is that demand is too low, resulting in low commodity prices. Its proposed solution is to inflate demand and prices through exports of LNG to nations willing to pay more for natural gas. This would incontrovertibly increase the price for natural gas in the domestic market but not in a manner calculated to foster energy independence.<sup>30</sup>

APGA submits that DOE/FE, instead of authorizing exports of domestic supplies of gas, should be supporting the use of domestic supplies to wean the country off of gasoline for transportation and coal for electricity generation. This is a viable option, according to APGA, because of low domestic natural gas prices. Moreover, APGA contends that:

DOE/FE owes a duty to the American people to ensure that U.S. energy markets function efficiently, not a duty to invigorate a global market for natural gas by encouraging exports of domestically produced gas.... The US should pursue policies aimed at keeping domestic gas prices in line with domestic demand, relatively stable and less susceptible to international events by preventing substantial exports of domestically produced natural gas.<sup>31</sup>

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<sup>29</sup> *Id.* at 7.

<sup>30</sup> APGA answer at 7.

<sup>31</sup> *Id.* at 8.

APGA, while acknowledging the predictions of future gas production contained in the studies that accompanied Sabine Pass' application, cautions that there are a number of uncertainties associated with future gas production. These include local opposition to shale gas fracking and related safety, environmental, and regulatory issues. They also include moratoria on drilling activities that prevent or delay offshore production. APGA points out that predictions of gas supply have not always proved out. According to APGA, the failure of such predictions in the past is reflected in Sabine Pass' submission of the instant application and by a recent decision by the owners of a natural gas liquefaction facility in Alaska to terminate exports sooner than expected because drilling activity had not offset production rates, making it unfeasible to continue natural gas exports. APGA also cautions that if the supply projections contained in the application do not prove out, a grant of the application will actually exacerbate the resulting domestic supply situation.

## **V. ANSWERS OF SABINE PASS**

### **A. Sabine Pass' Response to IECA**

Sabine Pass challenges IECA's claim that the proposed export of LNG has the potential to materially increase natural gas prices and could result in further loss of manufacturing jobs in the United States. Sabine Pass maintains that IECA has failed to address the empirical market studies and other data submitted as part of the application. That data, including the ARI reports, the NCI Report, and other data summarized above, allegedly: (1) show that the U.S. has significant natural gas resources available at a substantial discount to world prices sufficient to meet projected domestic needs over the 20-year period of the requested authorization; and (2) establishes that construction and operation of the Project and the associated export of LNG will

not have a material impact on U.S. natural gas prices but, rather, will significantly benefit the domestic economy, including the maintenance and creation of tens of thousands of jobs.

Sabine Pass maintains that IECA's motion to intervene fails to overcome the statutory presumption in section 3(a) of the Natural Gas Act that favors a grant of the application and DOE's applicable Policy Guidelines,<sup>32</sup> issued in 1984, that presume that the normal functioning of the competitive market rather than government intervention will benefit the public. Sabine Pass asserts that its application demonstrates that the principle of minimizing federal involvement in natural gas markets is particularly relevant in the context of the instant proceeding, especially given the existing and projected natural gas market conditions of abundant domestic supply. According to Sabine Pass, independent third-party analyses confirm that IECA's claims are unsupported:

While IECA does not substantiate a causal link between natural gas prices and manufacturing jobs, third-party analyses have concluded that structural macroeconomic factors are the dominant forces that influence manufacturing-sector employment. According to the Congressional Budget Office (CBO), long-term employment trends in U.S. manufacturing have been driven by strong productivity growth and capital investments by manufacturing industries, a shift in U.S. consumer spending towards services and away from finished goods, competition from foreign producers resulting from expanded international trade, and an increased preference by manufacturers to employ temporary labor. Notably, the CBO did not identify energy commodity prices as a contributing factor to employment trends in the manufacturing sector.<sup>33</sup>

In light of the foregoing, Sabine Pass asserts that IECA's request that DOE/FE restrict exports is not consistent with the public interest. Imposing a restriction on exports, in Sabine Pass' view would: (1) place artificial market constraints on natural gas market participants; and (2) interfere with free commerce in one sector of the economy for the purported benefit of another. Sabine Pass states that the relief sought by IECA would amount to an effective subsidy

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<sup>32</sup> 49 FR 6684 (February 22, 1984).

<sup>33</sup> Sabine Pass answer to IECA at 4.

of one economic sector at the expense of another. Sabine Pass maintains that these types of market constraints and subsidies are not in keeping with U.S. policy, which favors the open exchange of goods, including energy, with international trade partners. Additionally, Sabine Pass contends that in almost all circumstances such restrictions on exports of natural gas or LNG would be inconsistent with U.S. obligations as a party to World Trade Organization (WTO) Agreements.

Sabine Pass also points to recent market research in the public domain that reinforces the potential abundance of U.S. natural gas supply. In particular, Sabine Pass refers to the *Annual Energy Outlook 2011 (AEO 2011)* that: (1) shows EIA “doubled its estimate of technically recoverable U.S. [shale] gas [resources], to 827 Tcf from 353 Tcf<sup>34</sup> in the previous year; and (2) predicts that U.S. natural gas production will grow at an 0.8% annual rate from 2011 to 2035, outstripping U.S. natural gas demand growth over this period. According to Sabine Pass, EIA estimates that, by 2035, United States imports of natural gas effectively will have ceased (due to having fallen to 2 Bcf from 940 Bcf in 2009).

Sabine Pass asserts that market trends since the date that the application was filed likewise demonstrate a need for additional outlets for growing domestic production:

Despite a summer of much above-normal temperatures and strong fuel demand for electricity generation, natural gas prices have fallen to new lows on ample supplies and record storage inventories. Domestic natural gas production has grown sequentially in eight of nine months to date in 2010, and in September 2010, U.S. dry gas production levels of 60.4 Bcf/d were 7.6% higher than a year ago. Natural gas producers once again have been forced to shut-in production to cope with low wellhead prices, and investors plan to reduce future capital investments in the natural gas sector on low price expectations.<sup>35</sup>

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<sup>34</sup> Sabine Pass answer to IECA at 7.

<sup>35</sup> *Id.*

Sabine Pass restates its claims, as represented in the application, that a grant of the requested export authorization also will redound to the benefit of the public in various ways, including: (1) stabilize market price volatility because gas may be imported when demand is high in the United States and exported when demand is low; (2) greatly expand the market scope and access for domestic natural gas producers and thus serve to encourage domestic production at times when U.S. market prices might not otherwise do so; (3) help to keep natural gas prices for domestic manufacturers and other U.S. consumers at reasonable levels; (4) create jobs and increase domestic economic activity and tax revenues, both directly and indirectly; and (5) help to reduce barriers to trade and promote United States businesses in other countries.

**B. Sabine Pass' Response to APGA**

Sabine Pass states that the APGA position is that the export of domestically produced LNG would link the U.S. with international gas markets, thereby jeopardizing national security and increasing consumer prices. Sabine Pass maintains that the APGA opposition to the application relies on an “ill-defined standard of energy independence in evaluating the public interest that has no standing in legal precedence [sic] or established U.S. trade policy.”<sup>36</sup> Sabine Pass also contends that APGA did not challenge the empirical market studies and other data that support the application. Sabine Pass contends that APGA has not explained how a policy based on energy independence would work in practice but, instead, has expounded a position that is anti-competitive and not consistent with United States international trade policy. That policy, according to Sabine Pass, presumes that dual import and export activity serves the public interest and permits the open exchange of goods, including all major classes of energy commodities such as coal, petroleum, petrochemicals, electricity, and natural gas, in international markets on the

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<sup>36</sup> Sabine Pass answer to APGA at 4.

basis of each commodity's respective abundance or scarcity in the United States. Sabine Pass remarks that APGA presumably would permit imports of such commodities but not exports.

While APGA argues that domestic natural gas is secure and affordable because it is less susceptible to the vagaries of international events than other petroleum products, Sabine Pass counters that competitive forces, supported by U. S. open trade policy, have incentivized exploration and production (E&P) activities in the United States. Sabine Pass asserts that APGA fails to realize that just as imports of natural gas have benefited APGA's members in the past (when the domestic price of natural gas was higher and more volatile), so too the export of natural gas will benefit APGA's members under current circumstances by helping to moderate price volatility and keep domestic gas prices at reasonable levels for consumers; it will also, according to Sabine Pass, expand domestic productive capacity and will generate jobs, tax revenues, and a stronger economy. Sabine Pass identifies other alleged weaknesses in APGA's position: (1) APGA's position conflicts with the NEI; (2) adoption of APGA's position would negatively affect the United States balance of payments, which is already running at a significant deficit and is expected to increase in 2011 due to increased oil costs; (3) recent market data, as previously summarized in connection with Sabine Pass' answer to IECA, lends further support to the application; and (4) APGA has not contested the various economic benefits (also previously summarized) that, Sabine Pass alleges, will develop if the application is granted.

## **VI. DECISION**

### **A. Standard of Review**

Section 3(a) of the Natural Gas Act, 15 USC 717b(a), sets forth the statutory criteria for review of the instant export application:

[N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the

[Secretary of Energy<sup>37</sup>] authorizing it to do so. The [Secretary] shall issue such order upon application, unless after opportunity for hearing, [he] finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by [the Secretary's] order grant such application, in whole or part, with such modification and upon such terms and conditions as the [Secretary] may find necessary or appropriate.

Section 3(a) creates a rebuttable presumption that a proposed export of natural gas is in the public interest, and DOE must grant such an application unless those who oppose the application overcome that presumption.<sup>38</sup> DOE also issued a set of Policy Guidelines in 1984 setting out the criteria that DOE/FE employs in evaluating applications for natural gas imports.<sup>39</sup> The goals of the Policy Guidelines are to minimize federal control and involvement in energy markets and to promote a balanced and mixed energy resource system. The Guidelines provide that:

[t]he market, not government, should determine the price and other contract terms of imported [or exported] natural gas. The federal government's primary responsibility in authorizing imports [or exports] will be to evaluate the need for the gas and whether the import [or export] arrangement will provide the gas on a competitively priced basis for the duration of the contract while minimizing regulatory impediments to a freely operating market.<sup>40</sup>

While nominally applicable only to natural gas import cases, FE held in Order No. 1473 and in subsequent cases that the same policies will be applied to natural gas export applications.<sup>41</sup> In Order No. 1473, FE further indicated that it also was guided by DOE Delegation Order No. 0204-111. That delegation order, which authorized the Administrator of the Economic Regulatory Administration (ERA) to exercise the agency's review authority under

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<sup>37</sup> The Secretary's authority was established by the DOE Organization Act which transferred jurisdiction over imports and export authorizations from the Federal Power Commission.

<sup>38</sup> As we observed in Order No. 1473, *Phillips Alaska Natural Gas Corporation and Marathon Oil Company*, 2 FE ¶ 70,317, in order to overcome the rebuttable presumption favoring export authorizations, opponents of an export license must make an affirmative showing of inconsistency with the public interest. Order No. 1473, note 42 at 13, citing *Panhandle Producers and Royalty Owners Association v. ERA*, 822 F.2d 1105, 1111 (DC Cir. 1987).

<sup>39</sup> Cited above at note 24.

<sup>40</sup> *Id.*

<sup>41</sup> Order No. 1473 at 14, citing *Yukon Pacific*, Order No. 350, 1 FE 70,259 at 71,128.

NGA section 3, directed the Administrator to regulate exports “based on a consideration of the domestic need for the gas to be exported and such other matters as the Administrator finds in the circumstances of a particular case to be appropriate.”

Although DOE Delegation Order No. 0204-111 is no longer in effect, this agency’s review of export applications in decisions under current delegated authority has continued to focus on the domestic need for the natural gas proposed to be exported; whether the proposed exports pose a threat to the security of domestic natural gas supplies; and any other issue determined to be appropriate, including whether the arrangement is consistent with DOE’s policy of promoting competition in the marketplace by allowing commercial parties to freely negotiate their own trade arrangements.

In addition to the review and approvals required under the NGA, the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, requires DOE to give appropriate consideration to the environmental effects of its proposed decisions.

## **B. Summary of Findings and Conclusions**

Sabine Pass has submitted substantial evidence showing an existing and a projected future supply of domestic natural gas sufficient to simultaneously support the proposed export and domestic natural gas demand both currently and over the 20-year term of the requested authorization. No commenters or interveners have submitted contrary studies. The studies introduced by Sabine Pass indicate a modest increase in the domestic market price for natural gas through 2035 (see Appendix A). We find that this price increase reflects increasing marginal costs of additional domestic production for LNG exports.<sup>42</sup> We do not find that the price

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<sup>42</sup> Both the NCI and ARI analyses are based on market prices based on marginal production costs. Specifically, the NCI Report notes that in its model, supply from LNG imports and pipeline imports compete at the margin with domestic production. NCI Report at 19 and 31. The ARI Resource Report likewise is based on marginal costs, as its

increase is due to an alleged convergence of domestic natural gas prices with prices in certain international markets where the price of natural gas is linked to the price of oil or that approval of the requested authorization will threaten the nation's energy security.

Additionally, Sabine Pass has pointed to a number of economic and public benefits that will follow on a grant of the requested authorization, which include:

- Direct creation or continuation of approximately 3,000 engineering and construction jobs during the design and construction of the Liquefaction Project.
- Indirect creation of 30,000-50,000 permanent jobs in the E&P sector.
- Improving U.S. balance of payments through the exportation of approximately 2 Bcf/d of natural gas valued by the applicant at approximately \$5 billion and the displacement of \$1.7 billion in natural gas liquids imports.
- Creation of approximately 150 to 250 full-time positions that will be required to maintain and operate the Liquefaction Project.

While IECA and APGA have alleged a variety of negative consequences to the public interest from a grant of the requested authorization, they have not challenged the applicant's claims regarding the above-listed benefits. Additionally, although the opponents of the requested authorization have alleged potential negative impacts from a grant of the requested authorization, their arguments are not supported by factual studies or analyses and the opponents have not demonstrated that any potential negative impacts associated with a grant of the requested authorization are likely to outweigh the overall benefits from such an authorization, as further discussed *infra*.

### **C. Adequacy of Supply**

The natural gas supply/demand studies submitted by the applicant indicate that the existing and future supply of domestic natural gas is sufficient to simultaneously support the proposed LNG export volumes as well as domestic natural gas demand over the 20-year term of the authorization. The interveners and commenters did not submit studies or material evidence to support a contrary conclusion. The fact that neither IECA nor APGA offered a rebuttal study of the effects of the authorization on domestic natural gas supply, demand, and/or price over the requested 20-year term fails to support their claims that the requested authorization will not be consistent with the public interest.

### **D. DOE/FE's Continuing Duty to Protect the Public Interest**

The applicant has provided substantial evidence supporting its requested authorization. However, no person can unqualifiedly warrant either that the present conditions that have yielded substantial new gas reserves (*e.g.*, from advances in gas drilling technologies applied to domestic shale deposits) or the resulting projections of continuing supply increases contained in the studies presented by the applicant, will prove completely accurate over the entire 20-year projected term of the requested authorization. Potential changes in the technology of resource recovery as well as environmental, regulatory, and safety considerations are all variables affecting the accuracy of the applicant's projections.

In this regard, DOE/FE is aware of, and hereby takes administrative notice of, ongoing review activities by this agency and other federal agencies into the environmental and safety consequences of shale gas production.<sup>43</sup> The results of these review activities could reduce the

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<sup>43</sup> The Environmental Protection Agency (EPA) is conducting a study of the possible impacts from hydraulic fracturing on drinking water resources. The initial results from this study are expected by late 2012. *See*, Testimony of Bob Perciasepe, Deputy Administrator, U.S. Environmental Protection Agency, before the Subcommittee on

supplies of natural gas below the projections contained in the applicant's submission. On the other hand, the same improved drilling technologies that have contributed to a domestic surplus situation may be adopted within the 20-year time frame of the proposed authorization by other nations, thereby substantially enhancing the natural gas supply picture internationally.<sup>44</sup> The availability of such additional volumes in international markets could alter the economics of Sabine Pass' proposed export activities with the result that gas that would have been exported instead will be sold into domestic markets.

Projections regarding the demand for natural gas are likewise subject to change. For example, the demand for natural gas in the electricity sector and/or as a transportation fuel may accelerate with the result that natural gas that otherwise would have been exported is marketed domestically. Alternatively, the adoption of new energy efficient technologies that reduce fuel consumption levels nationally over the period of the requested authorization could offset in part an increase in future natural gas consumption levels.

We intend to monitor those conditions in the future to ensure that the exports of LNG authorized herein and in any future authorizations of natural gas exports do not subsequently lead to a reduction in the supply of natural gas needed to meet essential domestic needs. The

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Water and Wildlife, Committee on Environment and Public Works, United States Senate (April 12, 2011) at 3 ([http://www.epa.gov/ocir/hearings/testimony/112\\_2011\\_2012/2011\\_0412\\_bp.pdf](http://www.epa.gov/ocir/hearings/testimony/112_2011_2012/2011_0412_bp.pdf)). Also, President Obama's *Blueprint for a Secure Energy Future (Blueprint)*, issued March 30, 2011, outlined upcoming activities that the Federal Government will pursue to address concerns associated with natural gas development and ensure that production proceeds in a safe and responsible manner. These include regional public meetings by the Department of the Interior (DOI) to discuss the potential for expanding shale gas production on Federal lands; formation of a subcommittee of the Secretary of Energy Advisory Board (SEAB) to examine fracking issues and to develop recommendations to improve the safety and environmental performance of fracking; and establishment of a mechanism by DOE and EPA to provide technical assistance to states to assess the adequacy of existing state regulations regarding shale gas production.

See, [http://www.whitehouse.gov/sites/default/files/blueprint\\_secure\\_energy\\_future.pdf](http://www.whitehouse.gov/sites/default/files/blueprint_secure_energy_future.pdf).

<sup>44</sup> We note that in a recent study entitled *World Shale Gas Resources: An Initial Assessment of 14 Regions Outside the United States* (April 2011), the EIA estimated that there are 5,760 trillion cubic feet of technically recoverable shale gas resources in 32 countries outside the United States. The EIA asserts that this resource "could play an increasingly important role in global natural gas markets." (*Id.* at 2).

cumulative impact of these export authorizations could pose a threat to the public interest. DOE is authorized, after opportunity for a hearing and for good cause shown, to take action as is necessary or appropriate should circumstances warrant it.<sup>45</sup> Furthermore, DOE/FE will evaluate the cumulative impact of the instant authorization and any future authorizations for export authority when considering any subsequent application for such authority.

#### **E. Commencement of Operations within Seven Years**

As requested by Sabine Pass, the instant authorization will commence on the earlier of the date of first export or five years from the date of the issuance of this order. However, DOE/FE will require as a condition of the authorization that Sabine Pass commence LNG export operations using the planned liquefaction facilities to liquefy natural gas no later than seven years from the date of issuance of this order. The purpose of this condition is to ensure that other entities that may seek similar authorizations are not frustrated in their efforts to obtain those authorizations by authorization holders that are not engaged in actual export operations. In this proceeding, a seven-year operations commencement date has been selected as a reasonable accommodation given the applicant's representation that it plans to be ready to commence operations by 2015-2016. In effect, the order provides approximately two years beyond the current planned commencement date before the condition must be met. This will allow for time lost due to unplanned delays in licensing and construction of the planned liquefaction facilities.

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<sup>45</sup> In the event of any unforeseen developments of such significant consequence as to put the public interest at risk, DOE/FE is fully authorized to take action as necessary to protect the public interest. Specifically, DOE/FE is authorized by section 3(a) of the Natural Gas Act, after opportunity for a hearing and for good cause shown, to make a supplemental order as necessary or appropriate to protect the public interest. Additionally, DOE is authorized by section 16 of the Natural Gas Act "to perform any and all acts and to prescribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary or appropriate" to carry out its responsibilities. The authority of the Secretary of Energy in relation to the instant proceeding is set forth in sections 301(b) and 402(a)(2) of the DOE Organization Act (42 USC 7151(b) and 7172(a)(2), respectively).

## **F. International-Domestic Natural Gas Price Convergence**

IECA and APGA have not demonstrated that the proposed authorization will cause domestic natural gas prices to converge with those international natural gas prices that are linked to the price of oil. As the NCI report indicates, domestic production for domestic consumption is currently priced on the basis of the availability of supply and, in turn, the marginal costs of production within the United States.<sup>46</sup> While exports to a market where higher prices prevail may yield a price advantage to the exporter or seller in that international market, IECA and APGA have not explained why or how the export activity would cause the international price to be adopted within the well-supplied domestic natural gas market. As discussed above, the supply data provided on the record indicates a sufficient domestic natural gas resource base which, absent supervening regulatory actions due to environmental or other concerns, will be available to support both domestic needs and the proposed export authorization. Given the magnitude of domestic resources, we find that the proposed export activity is unlikely to alter the pricing mechanism for domestic natural gas production.

## **G. Domestic Energy Security and International Impacts**

DOE/FE has considered the potential U.S. energy security impacts of the proposed exports. There are two types of such potential impacts—domestic impacts on U.S. energy security and international impacts. Based on our review of the record, we find that neither is adverse to U.S. interests.

### **1. Domestic Impacts on Energy Security**

From a domestic perspective, the primary consideration of energy security is whether the public will have sufficient gas over the term of the authorization to meet its needs. As discussed

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<sup>46</sup> The NCI Report notes that supply from LNG imports and pipeline imports compete at the margin with domestic production. NCI Report at 19 and 31.

above, the evidence does not show a present or likely future threat to energy security in relation to the adequacy of domestic natural gas supplies.

We note that the applicant submitted comments that the ability to export domestic gas as LNG will greatly expand the market scope and access for domestic natural gas producers and thus serve to encourage domestic production at times when U.S. market prices might not otherwise do so.<sup>47</sup> While difficult to quantify, we are persuaded that directionally, natural gas production associated with exports in this application will result in increased production that could be used for domestic requirements if market conditions warrant such use. Overall, this will tend to enhance U.S. domestic energy security.

The applicant also submitted evidence anticipating the argument that natural gas exports threaten national energy security by encouraging dependence on imported oil. Specifically, the applicant submitted a study showing that the additional natural gas production associated with the proposed exports will co-produce natural gas liquids such as ethane, propane, and condensate that can be substituted for petroleum products made from imported oil, thereby in effect reducing U.S. dependence on imported oil and further promoting the effort to reduce U.S. trade imbalances. In particular, the applicant's submitted uncontroverted analysis indicating that the export authorization will enable the production of an additional 46.7 million barrels per year, or 128,000 barrels per day, of such natural gas liquids and will improve the United States trade balance by \$1.7 billion annually.<sup>48</sup>

The opponents of the application, particularly APGA, did not directly challenge the applicant's showing in this regard, but alleged that the exportation of domestically produced natural gas was contrary to United States energy independence because the consumption of

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<sup>47</sup> Application at 50-51.

<sup>48</sup> Application at 8-9, *citing* ARI Liquids Report at 6.

domestically produced natural gas within the United States would displace the consumption of imported oil and because a reduction in the importation of oil would mean a reduction in the nation's trade imbalances. While natural gas exports will also reduce trade imbalances, APGA argues that the better view is to consider the reduction in trade imbalances that will result from reduced oil imports.

We are not persuaded by the arguments of the opponents of the application. The applicant has demonstrated that the production of natural gas within the United States will yield certain natural gas liquids that will in part offset the need to import oil. In addition, we find that the argument that natural gas exports encourage oil imports is based on a mistaken assumption that oil and natural gas are substitutes for one another for most purposes. The greatest demand for imported oil is in the transportation sector of the economy. Since natural gas is not presently a widely available substitute fuel for petroleum as a transportation fuel, the impact of the proposed LNG exports on oil consumption is not likely to be significant at least for the immediate future.

In this regard, we acknowledge that the development of a domestic infrastructure capable of supporting broader use of natural gas in the transportation sector could alter the current situation. To the extent, therefore, that natural gas becomes a substitute fuel for petroleum on a wide-scale basis in the transportation sector, *e.g.* through the build-out of a geographically broad infrastructure capable of distributing natural gas to vehicles capable of using it, the argument made by the opponents to the authorization regarding reducing dependence on imported energy could be a factor for consideration in later proceedings. On the record of this proceeding, however, it has not been shown that the requested authorization will substantially increase the level of oil imports.

## **2. International Impacts**

While difficult to quantify and not, standing alone, dispositive of our decision, the international impacts of the requested authorization potentially will redound to the benefit of United States in several ways. First, the export of natural gas produced in the United States will help to promote new international markets for natural gas, thereby encouraging the development of additional productive resources in this country (as discussed above) and internationally. Second, augmentation of global natural gas supplies will support efforts by overseas electric power generators to switch away from oil or coal, both more carbon intensive and environmentally damaging than natural gas. Third, an improvement in natural gas supplies internationally will help certain countries that currently have limited sources of natural gas supplies to broaden and diversify their supply base. This will contribute to greater overall transparency, efficiency, and liquidity of international natural gas markets, encouraging a liberalized global natural gas trade and a greater diversification of global natural gas supplies. Fourth, these developments may encourage the decoupling of international natural gas prices from oil prices in some international natural gas markets and may exert downward pressure on natural gas market prices in relation to oil prices in those markets.

### **H. Other Economic and Public Benefits of the Requested Authorization**

The applicant has pointed to several other tangible economic and public benefits that are likely to follow from a grant of the requested authorization. These include:

- Significant increased economic activity and job creation, which will be especially helpful to the population of Cameron Parish, Louisiana, and to the entire Gulf Coast region that has suffered severe economic reverses in the years since Hurricanes Ike and Rita.
- Enhanced support for continued natural gas exploration and development activities to supply the export market.

- Increases in local, state, and federal tax revenues.
- The multiplier effects of all of these developments on the national economy and welfare.

The opponents of the requested authorization have not submitted evidence sufficient to rebut the above-listed benefits.<sup>49</sup> Nor have they provided an analysis or data demonstrating a negative impact from the proposed export on any specific economic factors or other public interest considerations within the United States. Such a showing, wholly absent from the record before us, could include, among other evidence, a detailed examination of such economic factors as gross domestic product, employment levels, and the like. With respect to other public interest considerations, such a showing could be based, among other evidence, upon demonstration of a causal connection between the subject LNG export activity and the ability of consumers to obtain natural gas at a reasonable price in sufficient quantities to meet their needs. Overall, therefore, we find that the applicant has submitted substantial evidence of economic and public benefits whereas the opponents of the authorization have not supported a finding that the requested authorization is inconsistent with the public interest.

### **I. Transfer, Assignment, or Change in Control**

Section 590.405 of DOE's natural gas import/export regulations (10 CFR 590.405) prohibits authorization holders from transferring or assigning authorizations to import or export natural gas without specific authorization by the Assistant Secretary for Fossil Energy. As a condition of this authorization, the requirement for prior approval by the Assistant Secretary also

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<sup>49</sup> One of these claimed benefits may be somewhat overstated. Specifically, Sabine Pass' claim of benefits associated with job creation and trade imbalance reductions assume that LNG exports will equal the requested authorization volume. But elsewhere in the application, Sabine Pass states that exports will ramp up over the first three years of operations and thereafter may be reduced in times of domestic need. Application at 7. Such reductions in export volumes may reduce the benefit of job creation and trade imbalance reduction. However, this overstatement is minor in comparison to the benefits that, we find, are likely to arise from a grant of the requested authorization.

will apply to any change of effective control of the authorization holder either through asset sale or stock transfer or by other means. This condition is necessary in order to ensure that, prior to any transfer or change in control, DOE/FE will be given an adequate opportunity to assess the public interest impacts of such a transfer or change.

#### **J. Agency Rights**

As described above, Sabine Pass requests authorization to export LNG on its own behalf or as agent for others. DOE/FE addressed the issue of agency rights in *Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC*, Order No. 2913, issued February 10, 2011. In Order No. 2913, DOE/FE approved a proposal by Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC (collectively, FLEX) to register each LNG title holder for whom FLEX sought to export LNG as agent. FLEX also proposed that this registration include a written statement by the title holder acknowledging and agreeing to comply with all applicable requirements included in its export authorization and to include those requirements in any subsequent purchase or sale agreement entered into by that title holder. In the FLEX application (FE Docket No. 10-160-LNG), the applicant also stated that it would file under seal with DOE/FE any relevant long-term commercial agreements that it reached with the LNG title holders on whose behalf the exports were performed.

In Order No. 2913, DOE/FE found that the above proposal was an acceptable alternative to the non-binding policy adopted by DOE/FE in *The Dow Chemical Company*, Order No. 2859, issued October 5, 2010. In *Dow Chemical*, DOE/FE established a non-binding policy that the title for all LNG authorized for export must be held by the authorization holder at the point of export. DOE/FE agreed to accept the FLEX alternative because it would ensure that the title holder was aware of all DOE/FE requirements applicable to the proposed export and would

provide DOE with a record of all authorized exports and direct contact information and a point of contact with the title holder. Moreover, DOE/FE found that the registration process was responsive to current LNG markets and provided an expedited process by which companies seeking to export LNG can do so. Additionally, in Order No. 2913, DOE/FE noted that those entities that hold title or expect to hold title to LNG that is stored in domestic LNG terminals can choose to submit an application to DOE for their own authorization to export LNG, and are not required to use the agency rights held by others.

The same policy considerations that supported DOE/FE's acceptance of the alternative proposal in Order No. 2913 apply here as well. In order to ensure that the public interest is served, the authorization granted herein shall be conditioned to require that where Sabine Pass proposes to export as agent for others, Sabine Pass must register the other entity with DOE/FE in accordance with the procedures and requirements described herein.

**K. Contract Provisions for the Sale or Transfer of LNG Exported**

In order to ensure that DOE/FE destination and reporting requirements included in this order are conveyed to subsequent title holders, DOE/FE will include as a condition of this authorization that future contracts for the sale or transfer of LNG exported pursuant to this Order shall include an acknowledgement of these requirements.

**L. Environmental Review**

As discussed above, a grant of the requested authorization may yield environmental benefits from greater use of natural gas both domestically and internationally. These support a conditional grant of the requested authorization. Additionally, DOE/FE is analyzing the potential environmental impacts of the requested export authorization under NEPA. DOE/FE is a cooperating agency in the environmental review being conducted by the FERC's Office of

Energy Projects in FERC Docket No. PF10-24-000. See, note 8 *supra*. As requested in the application, the authorization issued in the instant proceeding will be conditioned on the satisfactory completion of the environmental review process in FERC Docket No. PF10-24-000 and on issuance by DOE/FE of a finding of no significant impact or a record of decision pursuant to NEPA. See, 10 CFR 590.402 (authorizing DOE/FE to issue a conditional order prior to issuance of a final opinion and order).

**M. Request for Waiver**

Pursuant to 10 CFR 590.202(b), applications for export or import of natural gas are supposed to contain information concerning the source and security of the natural gas supply to be exported, including such items as contract volumes and a description of the gas reserves supporting the project, among other information. However, Sabine Pass states that because it has not entered into supply contracts, such transaction specific information is not presently available. Accordingly, Sabine Pass has requested a waiver of such requirements as set forth in Section 590.202, to the extent DOE deems them applicable.

Because it considers a waiver of its filing requirements unnecessary, DOE/FE will dismiss this request. Under section 590.202(b), the information in question is to be supplied “to the extent applicable” and supported “to the extent practicable.” Sabine Pass has adequately explained why compliance with the requirements of section 590.202(b) is neither presently applicable nor practicable. Sabine Pass, however, will be directed as a condition of the instant authorization, to submit transaction specific information if and when such contracts are executed.

**N. Requested Volumes**

Sabine Pass applied for authorization to export up to the equivalent of 16 mtpa of LNG, which they note is equivalent to approximately 2.2 Bcf/d, (803 Bcf per year) of natural gas. Pursuant to 10 CFR 590.202(b)(1), applications are to include the volumes of natural gas involved. In this regard, DOE/FE will accept the volume equivalent of 803 Bcf per year for the requested volume in the application.

**VII. FINDINGS**

Considering all of the reasons and considerations discussed above, in addition to those findings set forth above, we find that it has not been shown that a grant of the requested authorization will be inconsistent with the public interest, and we further find that the application should be granted subject to the terms and conditions set forth herein.

**ORDER**

Pursuant to section 3 of the Natural Gas Act, it is ordered that:

A. Sabine Pass' request herein for waiver of 10 CFR 590.202(b) is hereby dismissed. Sabine Pass shall comply with 10 CFR 590.202(b) to the extent the transaction specific information required under 10 CFR 590.202(b) becomes available.

B. Sabine Pass is authorized to export domestically produced LNG by vessel from the Sabine Pass LNG Terminal up to the equivalent of 803 Bcf per year of natural gas for a term of 20 years to commence on the earlier of the date of first export or five years from the date of the issuance of this authorization on its own behalf or as agent for others pursuant to one or more long-term contracts (a contract with a term greater than two years) that do not exceed the term of this authorization.

C. Sabine Pass must commence export operations using the planned liquefaction facilities no later than seven years from the date of issuance of this order.

D. This LNG may be exported to any country with which the United States does not have a FTA requiring the national treatment for trade in natural gas and LNG, which currently has or in the future develops the capacity to import LNG, and with which trade is not prohibited by United States law or policy.

E. Sabine Pass shall ensure that all transactions authorized by this order are permitted and lawful under United States laws and policies, including the rules, regulations, orders, policies, and other determinations of the Office of Foreign Assets Control of the United States Department of the Treasury and the FERC. Failure to comply with this requirement could result in rescission of this authorization and/or other civil or criminal remedies.

F. The authorization granted by this Order is conditioned on the satisfactory completion of that environmental review process in FERC Docket No. PF10-24-000 and on issuance by DOE/FE of a finding of no significant impact or a record of decision pursuant to NEPA.

G. Sabine Pass, or others for whom Sabine Pass acts as agent, shall include the following provision in any LPS agreement or other contract for the sale or transfer of LNG exported pursuant to this Order:

"Customer or purchaser acknowledges and agrees that it will resell or transfer LNG purchased hereunder for delivery only to countries identified in Ordering Paragraph D of DOE/FE Order No. 2961, issued May 20, 2011 in FE Docket No. 10-111-LNG, and/or to purchasers that have agreed in writing to limit their direct or indirect resale or transfer of such LNG to such countries. Customer or purchaser further commits to cause a report to be provided to Sabine Pass Liquefaction, LLC that identifies the country of destination, upon delivery, into

which the exported LNG was actually delivered, and to include in any resale contract for such LNG the necessary conditions to insure that Sabine Pass Liquefaction, LLC is made aware of all such actual destination countries."

H. Sabine Pass shall file with the Office of Natural Gas Regulatory Activities or cause others to file all executed long-term contracts associated with the long-term export of LNG from the Sabine Pass LNG Terminal pursuant to this authorization within 30 days of their execution. Sabine Pass shall file with the Office of Natural Gas Regulatory Activities or cause others to file all executed long-term contracts associated with the long-term supply of natural gas to the Sabine Pass LNG Terminal with the intent to process this natural gas into LNG for export pursuant to this authorization within 30 days of their execution.

I. Sabine Pass is permitted to use its authorization in order to export LNG on its own behalf or on behalf of or as agent for others, after registering the other party with DOE/FE.

J. As a condition of this authorization, Sabine Pass shall ensure that all persons required by this Order to register with DOE/FE have done so. Any failure by Sabine Pass to ensure that all such persons or entities are registered with DOE/FE shall be grounds for rescinding in whole or in part the authorization.

K. Registration materials shall include an acknowledgement and agreement by the registrant to supply Sabine Pass with all information and copies of contracts necessary in order to permit Sabine Pass to register that person or entity with DOE/FE, including: (1) the registrant's agreement to comply with this Order and all applicable requirements of DOE's regulations at 10 CFR Part 590, including but not limited to destination restrictions; (2) the exact legal name of the registrant, state/location of incorporation/registration, primary place of doing business, and the registrant's ownership structure, including the ultimate parent entity if the registrant is a

subsidiary or affiliate of another entity; (3) the name, title, mailing address, e-mail address, and telephone number of a corporate officer or employee of the registrant to whom inquiries may be directed; (4) an acknowledgement and agreement by the registrant to include the Ordering Paragraph F provision in any contract for the sale or transfer of LNG exported pursuant to this Order; (5) within 30 days of execution, a copy, filed with DOE/FE under seal, of any long-term contracts, including LPS agreements, that result in the export of natural gas, including LNG; and (6) within 30 days of execution by a person or entity required by this Order to register, a copy, filed with DOE/FE under seal, of any long-term contracts associated with the long-term supply of natural gas to the Sabine Pass LNG Terminal with the intent to process this natural gas into LNG for export pursuant to this authorization.

L. Each registration submitted pursuant to this Order shall have current information on file with DOE/FE. Any changes in company name, contact information, change in term of the long-term contract, termination of the long-term contract, or other relevant modification, shall be filed with DOE/FE within 30 days of such change(s).

M. Sabine Pass shall file with the Office of Natural Gas Regulatory Activities, on a semi-annual basis, written reports describing the progress of the planned liquefaction facility project. The reports shall be filed on April 1 and October 1 of each year, and shall include information on the progress of the Sabine Pass LNG Terminal liquefaction facility, and the status of the long-term contracts associated with the long-term export of LNG and any long-term supply contracts.

N. Prior to any change in control of the authorization holder, whether by asset sale, stock transfer, or other means, Sabine Pass must obtain the approval of the Assistant Secretary for Fossil Energy.

O. Within two weeks after the first export of LNG sourced from domestically produced natural gas occurs, Sabine Pass shall provide written notification of the date that the first export of LNG authorized in Order Paragraph A above occurred.

P. Monthly Reports: With respect to the LNG exports authorized by this Order, Sabine Pass shall file with the Office of Natural Gas Regulatory Activities, within 30 days following the last day of each calendar month, a report indicating whether exports of LNG have been made. Monthly reports shall be filed whether or not initial deliveries have begun. If exports have not occurred, a report of “no activity” for that month must be filed. If exports of LNG have occurred, the report must give the following details of each LNG cargo: (1) the name(s) of the authorized exporter registered with DOE/FE; (2) the name of the U.S. export terminal; (3) the name of the LNG tanker; (4) the date of departure from the U.S. export terminal; (5) the country of destination; (6) the name of the supplier/seller; (7) the volume in Mcf; (8) the price at point of export (FOB) per MMBtu; (9) the duration of the supply agreement (indicate spot sales); and (10) the name(s) of the purchaser (s).

(Approved by the Office of Management and Budget under OMB Control No. 1901-0294)

Q. The first monthly report required by this Order is due not later than June 30, 2011, and should cover the reporting period from May 20, 2011, through May 31, 2011.

R. All monthly report filings shall be made to U.S. Department of Energy (FE-34), Office of Fossil Energy, Office of Natural Gas Regulatory Activities, P.O. Box 44375, Washington, D.C. 20026-4375. Alternatively, reports may be e-mailed or faxed to the Office of Natural Gas Regulatory Activities, respectively, at [ngreports@hq.doe.gov](mailto:ngreports@hq.doe.gov) or (202) 586-6050.

Issued in Washington, D.C., on May 20, 2011.

A handwritten signature in black ink, reading "John A. Anderson", written over a horizontal line.

John A. Anderson  
Manager, Natural Gas Regulatory Activities  
Office of Oil and Gas Global Security and Supply  
Office of Fossil Energy

## APPENDIX A

## Summary of NCI Report Henry Hub Case Study Prices and Price Impact of Exports (from Application)

(2009 dollars) <u>Case Description</u>	<u>Domestic Consumption</u> (Bcf/d)		<u>LNG Exports</u> (Bcf/d)	<u>Henry Hub Price</u> (\$/MMBtu)		<u>Price Change</u> (\$/MMBtu)		<u>Price Change</u> (%)	
	<u>2015</u>	<u>2035</u>		<u>2015</u>	<u>2035</u>	<u>2015</u>	<u>2035</u>	<u>2015</u>	<u>2035</u>
	GHG As Is Case	60.2		68.9	--	3.29	6.97	(a)	(a)
GHG As Is, Moderate Export Case	60.1	68.9	1	3.49	7.20	0.20	0.23	6.1%	3.3%
GHG As Is, High Export Case	60.1	69.0	2	3.64	7.46	0.35	0.49	10.6%	7.0%
GHG Plus Case	67.5	83.1	--	4.5	11.43	(b)	(b)	(b)	(b)
GHG Plus, High Export Case	67.3	82.7	2	5.02	12.33	0.52	0.9	11.6%	7.9%

(a) The GHG As Is Case is the reference case and price used for the GHG As Is, Moderate and High Export Cases. The impacts of LNG exports are shown as a change in price, and % change in price, relative to the GHG As Is Case.

(b) The GHG Plus Case is the reference case and price used for the GHG Plus, High Export Case. The impact of LNG exports is shown as a change in price, and % change in price, relative to the GHG Plus Case.

Case Explanation

- GHG As Is Case – NCI reference case assuming *status quo* energy policy laws
- GHG As Is, Moderate Export Case – assumes exports of 1.0 Bcf/d from the Project beginning in 2015
- GHG As Is, High Export Case – assumes exports of 2.0 Bcf/d from the Project beginning in 2015
- GHG Plus Case – assumes the adoption of a carbon tax and incentives to foster the conversion of heavy duty trucks to natural gas vehicles and expanded construction of a natural gas fueling infrastructure
- GHG Plus, High Export Case – same as GHG Plus Case but also assumes exports of 2.0 Bcf/d from the Project beginning in 2015