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September 9, 2013

Mr. John Anderson
Office of Fuels Programs, Fossil Energy
U.S. Department of Energy
Docket Room 3F-056, FE-50
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

13-121-LNG

## NORTON ROSE FULBRIGHT

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Re: In the Matter of Sabine Pass Liquefaction, LLC

FE Docket No. 13- -LNG

Application for Long-Term Authorization to Export Liquefied Natural Gas

Dear Mr. Anderson:

Enclosed for filing on behalf of Sabine Pass Liquefaction, LLC ("SPL"), please find SPL's application for long-term multi-contract authorization for SPL to engage in exports of domestically produced liquefied natural gas ("LNG") in an amount up to the equivalent of approximately 314 billion standard cubic feet ("Bcf") of natural gas per year. SPL seeks authorization to export LNG to: (i) any nation that currently has or in the future develops the capacity to import LNG and with which the United States currently has, or in the future enters into, a free trade agreement ("FTA") requiring the national treatment for trade in natural gas and LNG; and (ii) any other country with which trade is not prohibited by U.S. law or policy, and that has, or in the future develops, the capacity to import LNG for a 20-year period. 1

Should you have any questions, please contact the undersigned at (212) 318-3009.

Respectfully submitted,

Lisa M. Tonery Tania S. Perez Attorneys for

Sabine Pass Liquefaction, LLC

A check in the amount of \$50.00 is being provided as the filing fee stipulated by 10 C.F.R. § 590.207.

#### UNITED STATES OF AMERICA DEPARTMENT OF ENERGY OFFICE OF FOSSIL ENERGY

In The Matter Of:	)	
SABINE PASS LIQUEFACTION, LLC	)	FE Docket No. 13 - 121 - LNG
	)	

#### APPLICATION OF SABINE PASS LIQUEFACTION, LLC FOR LONG-TERM AUTHORIZATION TO EXPORT LIQUEFIED NATURAL GAS

Pursuant to Section 3 of the Natural Gas Act ("NGA")<sup>1</sup> and Part 590 of the Department of Energy's ("DOE") regulations,<sup>2</sup> Sabine Pass Liquefaction, LLC ("SPL") hereby requests that DOE, Office of Fossil Energy ("FE") grant long-term multi-contract authorization for SPL to engage in exports of domestically produced liquefied natural gas ("LNG") in an amount up to the equivalent of approximately 314 billion standard cubic feet ("Bcf") of natural gas per year. SPL is seeking authorization to export LNG to: (i) any nation that currently has or in the future develops the capacity to import LNG and with which the United States currently has, or in the future enters into, a free trade agreement ("FTA") requiring the national treatment for trade in natural gas and LNG ("FTA Authorization");<sup>3</sup> and (ii) any other country with which trade is not prohibited by U.S. law or policy, and that has, or in the future develops, the capacity to import LNG ("non-FTA Authorization"). SPL is seeking such authorization for a 20-year period

<sup>&</sup>lt;sup>1</sup> 15 U.S.C. § 717b (2012).

This application (the "Application") is structured to conform to 10 C.F.R. Part 590 Subpart B—Applications for Authorization to Import or Export Natural Gas. Additional materials in support of this Application may be found in the Appendices hereto.

<sup>&</sup>lt;sup>3</sup> Currently, the countries that have such FTAs with the United States include: Australia, Bahrain, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Chile, Morocco, Canada, Mexico, Oman, Peru, Singapore, Republic of Korea, Jordan, and Panama.

commencing the date of first export or eight years from the date of issuance of the authorization requested herein. In support hereof, SPL provides as follows:

#### 10 C.F.R. § 590.202(a):

#### 1. Exact legal name of applicant:

The exact legal name of the applicant is Sabine Pass Liquefaction, LLC. SPL has its principal place of business in Houston, Texas.

#### 2. Service list contacts:

All correspondence and communications concerning this Application, including all service of pleadings and notices, should be directed to the following persons:<sup>4</sup>

Patricia Outtrim Lisa M. Tonery Rina Chang Tania S. Perez

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#### 3. Statement of action sought from DOE/FE:

SPL hereby requests that DOE/FE grant long-term, multi-contract authorization for SPL to export 314 Bcf per year of natural gas in the form of LNG from the Sabine Pass Liquefaction Project<sup>5</sup> to FTA and non-FTA nations. Trains 1 through 4 of the Liquefaction Project are

SPL requests waiver of Section 590.202(a) of DOE's regulations, 10 C.F.R. § 590.202(a) (2012), to the extent necessary to include outside counsel on the official service list in this proceeding.

The Liquefaction Project is being developed by SPL and its affiliate, Sabine Pass LNG, L.P. ("Sabine Pass LNG"), at the existing Sabine Pass LNG import, storage and vaporization terminal in Cameron Parish, Louisiana ("Sabine Pass LNG Terminal"). The Federal Energy Regulatory Commission ("Commission" or "FERC") authorized the construction and operation of the Liquefaction Project consisting of four LNG production trains (i.e., Trains 1, 2, 3 and 4). See Sabine Pass Liquefaction, LLC and Sabine Pass LNG, L.P.,

currently under construction. SPL, Sabine Pass LNG, and Sabine Pass Liquefaction Expansion, LLC will be filing in the near term an application with FERC for authorization pursuant to Section 3(a) of the NGA to site, construct and operate two additional LNG production trains ("Train 5" and "Train 6"), which constitute the Liquefaction Expansion Project.<sup>6</sup>

SPL currently has long-term authorization from DOE/FE to export 803 Bcf per year of LNG from the Liquefaction Project to FTA and non-FTA nations.<sup>7</sup> Additionally, SPL has long-term authorization from DOE/FE to export an additional 101 Bcf per year and 88.3 Bcf per year of LNG to FTA nations, subject to the respective terms in its LNG Sale and Purchase Agreements ("SPAs") with Total Gas & Power North America, Inc. ("TGPNA") and Centrica plc ("Centrica").<sup>8</sup> SPL's instant request encompasses the volume of LNG that can be produced from Trains 5 and 6 that is not already committed for export under the TGPNA and Centrica SPAs.<sup>9</sup>

139 FERC ¶ 61,039 (2012), reh'g denied, 140 FERC ¶ 61,076 (2012); see also Sabine Pass Liquefaction, LLC and Sabine Pass LNG, L.P., 144 FERC ¶ 61,099 (2013).

As reflected in draft Resource Reports 1 for the Liquefaction Expansion Project filed with FERC on July 25, 2013 in Docket No. PF13-8-000, the peak LNG production capacity of each of Trains 5 and 6 is estimated to be 251.5 Bcf per year, for a total capacity of 503 Bcf per year.

See Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2833 (Sept. 7, 2010); Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961 (May 20, 2011); Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961-A (Aug. 7, 2012); Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961-B (Jan. 25, 2013).

See Sabine Pass Liquefaction, LLC, DOE/FE Order No. 3306 (July 11, 2013); Sabine Pass Liquefaction, LLC, DOE/FE Order No. 3307 (July 12, 2013). SPL's applications for non-FTA export authorization under the terms of its SPAs with TGPNA and Centrica are pending in DOE/FE Docket Nos. 13-30-LNG and 13-42-LNG, respectively.

SPL's delivery obligations under its SPAs are not tied to individual trains. Instead, SPL's obligation to deliver LNG under its contracts becomes effective upon the date that specified trains become commercially operable, but SPL retains the flexibility to satisfy its delivery obligations with LNG from any train at its facility. In the case of the TGPNA and Centrica SPAs, the obligation to deliver LNG arises when the fifth train becomes commercially operable.

SPL is herein seeking the issuance by DOE/FE of authorization to export LNG for a 20year term commencing the earlier of the date of first export or eight years from the date of issuance of the authorizations requested herein.

SPL is requesting this authorization both on its own behalf and as agent for other parties who will hold title to the LNG at the time of export. SPL will comply with all DOE/FE requirements for exporters and agents, including the registration requirements as first established in *Freeport LNG Development, L.P.*, DOE/FE Order No. 2913, and most recently set forth in *Lake Charles Exports, LLC*, DOE/FE Order No. 3324. In this regard, SPL, when acting as agent, will register with DOE/FE each LNG title holder for whom it seeks to export as agent, and will provide DOE/FE with a written statement by the title holder acknowledging and agreeing to (i) comply with all requirements in SPL's long-term export authorization; and (ii) include those requirements in any subsequent purchase or sale agreement entered into by the title holder. SPL also will file—or cause to be filed—any relevant long-term commercial agreements that it enters into with the LNG title holders on whose behalf the exports are performed.

SPL respectfully requests that the DOE/FE issue the FTA Authorization without modification or delay in accordance with the applicable standard of review under Section 3(c) of the NGA,<sup>10</sup> and the non-FTA Authorization as requested herein prior to March 31, 2014. In this regard, SPL requests that the non-FTA Authorization be issued as a conditional order, pursuant to Section 590.402 of the DOE regulations,<sup>11</sup> followed by issuance of a final order immediately upon completion of the environmental review of the Liquefaction Expansion Project by FERC.<sup>12</sup>

<sup>10</sup> 15 U.S.C. § 717b(c) (2012).

<sup>&</sup>lt;sup>11</sup> 10 C.F.R. § 590.402 (2012).

In promulgating its regulations setting forth the administrative procedures for the import and export of natural gas, DOE indicated that issuance of a conditional decision is appropriate when the application at issue involves,

# 4. <u>Justification for the action sought from DOE/FE, including why such action is not inconsistent with the public interest:</u>

The granting of the authorizations requested herein is justified pursuant to Section 3 of the NGA. SPL's request for FTA Authorization must be reviewed under Section 3(c) of the NGA, which provides that applications to export LNG from or to nations with which the United States has an FTA are deemed to be in the public interest and must be granted without modification or delay.<sup>13</sup> SPL's request for Non-FTA Authorization must be reviewed under Section 3(a) of the NGA, which provides that DOE/FE is required to authorize exports to a foreign country unless there is a finding that such exports "will not be consistent with the public interest."<sup>14</sup> Section 3(a) of the NGA states in relevant part:

#### (a) Mandatory authorization order

After six months from June 21, 1938, no 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 Commission authorizing it to do so. The Commission shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest.<sup>15</sup>

Section 3(a) thus creates a presumption in favor of approval of an application for non-FTA authorization, which opponents bear the burden of overcoming. Even disregarding this presumption in favor of approval, there is ample evidence in the public record that exports of LNG, such as those requested by SPL in this Application, are in the public interest. In this

for example, the importation of LNG into new terminal facilities. *See Import and Export of Natural Gas*, 46 Fed. Reg. 44,696, 44,700 (Sept. 4, 1981). In such a case, DOE reviews the application to determine if the proposed importation is in the public interest based on the considerations within DOE's jurisdiction, while, concurrently, FERC must review other aspects of the proposed importation such as siting, construction and operation of the LNG receiving terminal facilities. *See id*.

See id; see also Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2833, at 5 (Sept. 7, 2010); Phibro LLC, DOE/FE Order No. 2803, at 2 (June 16, 2010); Applied LNG Technologies USA, L.L.C., DOE/FE Order No. 2747, at 2 (Jan. 29, 2010).

<sup>&</sup>lt;sup>14</sup> 15 U.S.C. § 717b(a).

<sup>&</sup>lt;sup>15</sup> *Id*.

regard, in granting SPL's request for export authorization in Order Nos. 2961 and 2961-A, <sup>16</sup> DOE/FE pointed to the market studies and other evidence and comments that SPL submitted in that proceeding demonstrating the substantial economic and public benefits that are likely to follow from exports of natural gas as LNG. That same rationale is equally applicable here, and SPL incorporates herein by reference the substantial record that it developed demonstrating the public interest benefits of exports in FE Docket No. 10-111-LNG. <sup>17</sup> Additionally, SPL makes reference to the macroeconomic study commissioned by DOE and discussed in Appendix B hereto, <sup>18</sup> as well as to the multitude of letters from members of the United States Congress submitted in response to the NERA Study supporting approval of the export of domestic natural gas as LNG. <sup>19</sup> Finally, and as provided more fully below, because SPL intends to sell natural gas from Train 5 and Train 6 of the Liquefaction Expansion Project under contractual arrangements

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<sup>&</sup>lt;sup>16</sup> See supra n.7.

See, e.g., Sabine Pass Liquefaction, LLC, Application for Long-Term Authorization to Export Liquefied Natural Gas 33–67, FE Docket No. 10-111-LNG (Sept. 7, 2010) (discussing how the Liquefaction Project would provide a market solution for further deliberate development of emerging sources of domestic natural gas, result in benefits to the public, and otherwise be in the public interest).

NERA Economic Consulting, *Macroeconomic Impacts of LNG Exports from the United States* (Dec. 3, 2012), available at <a href="http://energy.gov/sites/prod/files/2013/04/f0/nera\_lng\_report.pdf">http://energy.gov/sites/prod/files/2013/04/f0/nera\_lng\_report.pdf</a> [hereinafter "NERA Study"].

See, e.g., Ltr. from U.S. Sens. James M. Inhofe, Mary Landrieu, David Vitter, Mark Begich & Tom Coburn to Hon. Steven Chu. Sec'y, DOE (Feb. 20. 2013). available http://www.coburn.senate.gov/public//index.cfm?a=Files.Serve&File\_id=23fb206c-b12c-4c1a-a597-1e6b7c9dc772; Ltr. from U.S. Sen. Lisa Murkowski to Hon. Steven Chu, Sec'y, DOE (Jan. 25, 2013), available http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/Lisa\_Murkowski01\_24\_13.p df; Ltr. from U.S. Sen. John Cornyn to Hon. Steven Chu, Sec'y, DOE (Jan. 24, 2013), available at http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/john\_cornyn\_Exec.pdf; Ltr. from U.S. Sen. James M. Inhofe to Hon. Steven Chu, Sec'y, DOE (Jan. 23, 2013), available at http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/holland\_luke\_Inhofe01\_01\_2 3 13.pdf; Ltr. from U.S. Sen. David Vitter to Hon. Steven Chu, Sec'y, DOE (Jan. 23, 2013), available at http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/Vitter.pdf; Ltr. from U.S. Sens. Mary L. Landrieu & Heidi Heitkamp to Hon. Steven Chu, Sec'y, DOE (Jan. 23, 2013), available at http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/landrie.pdf; Ltr. from U.S. Rep. Charles W. Boustany, M.D., to Hon. Steven Chu, Sec'y, DOE (Jan. 16, 2013), available at http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/Boustanyletter.pdf.

that will be priced competitively with domestic natural gas, it will satisfy the public interest standard as set forth in DOE's Policy Guidelines.<sup>20</sup>

#### 10 C.F.R. § 590.202(b):

1. <u>Scope of the project, including volumes of natural gas involved, dates of commencement</u> and completion of proposed export and facilities to be utilized or constructed:

SPL herein requests authorization to export LNG in an amount up to the equivalent of approximately 314 Bcf per annum of natural gas. SPL anticipates that construction of Train 5 of the Liquefaction Project will commence by November 2014, with approximately 50 months required for the completion and start-up. SPL anticipates that exports will commence as early as December 2018, and requests authorization to export for a term of 20 years. Construction and start-up of Train 6 would begin when commercially feasible.

#### 2. Source and security of the natural gas supply to be exported:

SPL will purchase natural gas to be used as fuel and feedstock for LNG production from the interstate and intrastate grid at points of interconnection with other pipelines and points of liquidity both upstream and downstream of the Cheniere Creole Trail Pipeline, L.P. system and other systems that will interconnect with the Liquefaction Expansion Project. Through these pipelines' interconnections with various other interstate and intrastate pipeline systems, the Liquefaction Expansion Project will have access to virtually any point on the U.S. interstate pipeline system through direct delivery or by displacement.<sup>21</sup> The proximity of the Liquefaction

Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (Feb. 22, 1984) [hereinafter Policy Guidelines].

SPL has previously explained that the historically prolific Gulf Coast Texas and Louisiana onshore gas fields, the gas fields in the Permian, Anadarko, and Hugoton basins, and the emerging unconventional gas fields in the Barnett, Haynesville, Eagle Ford, Fayetteville, Woodford, and Bossier basins represent the most likely sources of physical supply. See Sabine Pass Liquefaction, LLC, Application for Long-Term Authorization to Export Liquefied Natural Gas, FE Docket No. 10-111-LNG (Sept. 7, 2010). Given the large size of the reserves in

Expansion Project to multiple interstate and intrastate pipelines will enable SPL to purchase natural gas from multiple conventional and unconventional basins located across the region, state, and virtually anywhere in the nation. This supply can be sourced in large volumes in the spot market, or pursued under long-term arrangements. To date, SPL has not entered into any natural gas purchase agreements for the purpose of supplying natural gas feedstock for the exports contemplated in this Application.

#### 3. <u>Identification of participants in the transaction, and affiliations:</u>

SPL is an indirect subsidiary of Cheniere Energy Partners, L.P. ("Cheniere Partners"), a Delaware limited partnership majority owned by Cheniere Energy, Inc. ("Cheniere Energy"). Cheniere Partners is a Delaware limited partnership with its primary place of business in Houston, Texas, and Cheniere Energy is a Delaware corporation with its primary place of business in Houston, Texas. Cheniere Energy, both of its own accord and through Cheniere Partners, is a developer of LNG terminals and natural gas pipelines on the Gulf Coast, including the Sabine Pass LNG Terminal. SPL is authorized to do business in the States of Texas and Louisiana.

#### 4. Terms of the transaction:

SPL has not yet entered into any long-term gas supply or long-term export contracts in conjunction with the LNG export authorizations requested herein. Accordingly, SPL is not submitting transaction-specific information (*e.g.*, long-term supply agreements and long-term export agreements) at this time, and requests that DOE/FE make a similar finding to that in DOE/FE Order No. 2961, and most recently set forth in *Lake Charles Exports*, *LLC*, DOE/FE

these fields and, in particular, the well-documented increase in production associated with the emerging unconventional resources, the proposed exports are not anticipated to have any meaningful impact on the availability or pricing of domestic natural gas. *See id.* 

Order No. 3324, with regard to the transaction-specific information requested in Section 590.202(b) of the DOE regulations.

SPL will file—or cause to be filed—either unredacted contracts, or long-term contracts under seal, with either: (i) a copy of each long-term contract with commercially sensitive information redacted, or (ii) a summary of all major provisions of the contracts including, but not limited to, the parties to each contract, contract term, quantity, any take-or-pay or equivalent provisions/conditions, destinations, re-sale provisions, and other relevant provisions.

#### 5. Price adjustment mechanisms; competitiveness:

DOE issued its *Policy Guidelines* in 1984, delineating the criteria that DOE shall utilize in reviewing applications for natural gas imports;<sup>22</sup> the agency has applied these criteria in its review of applications for natural gas exports, as well.<sup>23</sup> The *Policy Guidelines* provide that the "policy cornerstone of the public interest standard is competition."<sup>24</sup> Competitive import/export arrangements are therefore an essential element of the public interest and, so long as the sales agreements are set in terms that are consistent with competitively-determined prices of domestic natural gas, they should be considered to "largely" meet the public interest standard.<sup>25</sup> SPL anticipates reaching contractual arrangements for the authorization sought herein consistent with competitively-determined prices.

Policy Guidelines, supra n.20, at 6684.

See Phillips Alaska Nat. Gas Corp. & Marathon Oil Co., DOE/FE Order No. 1473, at 14 (Apr. 2, 1999) (citing Yukon Pac. Corp., DOE/FE Order No. 350, 1 FE ¶ 70,259, at ¶ 71,128 (1989)).

Policy Guidelines, supra n.20, at 6687.

<sup>&</sup>lt;sup>25</sup> See id.

#### 6. <u>Lack of national or regional need for the gas to be exported:</u>

As discussed more fully in Appendix B, it is evident from the current supply/demand balance of natural gas in the United States that the Application's request for authorizations to export domestic natural gas production will not impinge on any national or regional need for the gas.<sup>26</sup>

#### 7. Environmental impact:

The potential environmental impact of the Liquefaction Expansion Project will be reviewed by FERC as the lead agency in accordance with the Energy Policy Act of 2005, which amended the NGA to streamline the process for reviewing and approving natural gas projects, including LNG facilities.<sup>27</sup> The NGA expressly provides FERC with lead agency status for the purposes of coordinating all applicable federal authorizations and complying with the National Environmental Policy Act ("NEPA").<sup>28</sup> Consistent with these statutes, it is anticipated that DOE/FE will participate as a cooperating agency in FERC's environmental review process for the Liquefaction Expansion Project. DOE/FE has adopted regulations of the Council on Environmental Quality ("CEQ") that govern its role as a cooperating agency in the NEPA process.<sup>29</sup> DOE's regulations provide that "DOE shall cooperate with the other agencies in developing environmental information."<sup>30</sup> CEQ's regulations further provide for DOE/FE to

See Sabine Pass Liquefaction, LLC, Application for Long-Term Authorization to Export Liquefied Natural Gas 50–54, FE Docket No. 10-111-LNG (Sept. 7, 2010) (explaining that supply/demand balance demonstrates the lack of regional/national need).

<sup>&</sup>lt;sup>27</sup> See Pub. L. No. 109-508, § 311(c)(2), 119 Stat. 594, 685 (2005) (codified at 15 U.S.C. § 717b(e)).

<sup>&</sup>lt;sup>28</sup> See 15 U.S.C. § 717n(b)(1) (2012).

<sup>&</sup>lt;sup>29</sup> See 10 C.F.R. § 1021.103 (2012).

<sup>&</sup>lt;sup>30</sup> See id. § 1021.342; see also 40 C.F.R. §§ 1501.6, 1508.5 (2012) (requiring that Federal agencies responsible for preparing NEPA analyses and documentation do so in cooperation with State and local governments and other agencies with jurisdiction by law or special, and providing that—upon request of the lead agency—any other Federal agency which has jurisdiction by law shall be a cooperating agency).

adopt FERC's findings so long as FERC has satisfactorily addressed any comments raised by DOE/FE during the cooperating agency process.<sup>31</sup>

WHEREFORE, SPL respectfully requests that DOE/FE grant its request for long-term, multi-contract authorization to engage in exports of 314 Bcf per year of domestically produced LNG from the Liquefaction Project to FTA and non-FTA nations, for a 20-year period commencing the date of first export or eight years from the date of issuance of the authorization requested herein. SPL respectfully requests that the DOE/FE issue the FTA Authorization without modification or delay in accordance with the applicable standard of review, and the non-FTA Authorization as requested herein prior to March 31, 2014.

Respectfully submitted,

Lisa Tonery Tania S. Perez

Attorneys for

Sabine Pass Liquefaction, LLC

Fulbright & Jaworski LLP 666 Fifth Avenue New York, New York 10103 (212) 318-3009

Dated: September 9, 2013

<sup>31</sup> See 40 C.F.R. § 1506.3 (2012).

## Appendix A

### **OPINION OF COUNSEL**



Cheniere Energy, Inc. 700 Milam Street, Suite 800 Houston, Texas 77002 phone: 713.375.5000

fax: 713.375.6000

September 9, 2013

Office of Fuel Programs
Fossil Energy, U.S. Department of Energy
Docket Room 3F-056, FE50
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 10585

Re: In the Matter of Sabine Pass Liquefaction, LLC
FE Docket No. 13-\_\_-LNG
Application for Long-Term Authorization to Export Liquefied Natural Gas
Opinion of Counsel

Dear Sir or Madam:

This opinion of counsel is provided in accordance with the requirements of Section 590.202(c) of the U.S. Department of Energy's regulations, 10 C.F.R. § 590.202(c) (2012). I have examined the Limited Liability Company Agreement of Sabine Pass Liquefaction, LLC ("SPL") and other authorities as necessary, and have concluded that the proposed exportation of liquefied natural gas is within SPL's corporate powers. Further, SPL is authorized to do business in Louisiana and Texas, and to engage in foreign commerce.

Respectfully submitted,

By: Greg Rayford, Senior Vice President

and General Counsel Cheniere Energy, Inc.

700 Milam Street, Suite 800

Houston, TX 77002 Phone: (713) 375-5000 Fax: (713) 375-6000

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#### Appendix B

#### Further Discussion of the Projected Need for the Natural Gas to be Exported

The Liquefaction Expansion Project is motivated by the improved outlook for domestic natural gas production owing to drilling productivity gains that have enabled rapid growth in supplies in the Gulf Coast region and elsewhere in the U.S.<sup>32</sup> The inability of U.S. residential, commercial, industrial, and electric consumers to increase consumption quickly enough to offset growth in production has contributed to projections for sustained low prices for natural gas in the U.S. Rapid growth in U.S. natural gas production and reserves have driven wellhead prices to historically low levels,<sup>33</sup> resulting in decreased investment by the natural gas industry, as well as reductions in associated economic activity, landowner royalties, taxes and fee income.

As provided in DOE Delegation Order No. 0204-111, domestic need for the natural gas proposed to be exported is "the only explicit criterion that must be considered in determining the public interest." SPL submits that the Liquefaction Expansion Project supports and encourages the continued development of natural gas resources during times when domestic prices of natural gas are depressed, and subsidizes the production of a quantity of natural gas that can be deployed on short notice when and if market prices induce the cancellation of the export of LNG cargoes, thereby mitigating volatility that would otherwise arise and ensuring that domestic supplies will be available over the duration of commodity market cycles.

Domestic wellhead natural gas production in 2012 totaled 29.79 trillion standard cubic feet ("Tcf"), which is among the highest in U.S. history. See U.S. Energy Information Admin. ("EIA"), Natural Gas Gross Withdrawals and Production, <a href="http://www.eia.gov/dnav/ng/ng">http://www.eia.gov/dnav/ng/ng</a> prod sum dcu NUS a.htm (last updated Aug. 30, 2013).

Henry Hub natural gas futures on the New York Mercantile Exchange traded at times during 2012 at the lowest price levels seen since 2002. *See* David Bird, *US Gas: Futures Slip to Fourth-Straight New Decade Low on Glut*, Dow Jones Energy Serv., Apr. 13, 2012, available at http://m.foxbusiness.com/quickPage.html?page=19453&content=70222180&pageNum=-1.

<sup>&</sup>lt;sup>34</sup> Phillips Alaska Nat. Gas Corp. & Marathon Oil Co., DOE/FE Order No. 1473, at 14 (Apr. 2, 1999).

Furthermore, innovations in the market have resulted in the availability of potential supplies that far exceed market need for the foreseeable future. Cheniere Energy previously commissioned a report by Advanced Resources International ("ARI"), *U.S. Natural Gas Resources and Productive Capacity: Mid-2012* ("ARI Resource Report"),<sup>35</sup> to assess the scope of domestic natural gas resources and their potential for future recovery. The ARI Resource Report, as well as publicly available information, demonstrates that the U.S. has significant natural gas resources available to meet projected future domestic needs, including the quantities contemplated for export under this Application. In this regard, SPL submits that the need for the LNG export capability to be provided by the Liquefaction Expansion Project is unequivocally supported by the existing and projected trends concerning U.S. gas demand and supply.

#### 1. National Supply – Overview

Domestic natural gas production has expanded rapidly in recent years as innovations in new drilling and completion technologies have increased productivity. Since 2005, U.S. marketed natural gas production has grown 26.9%, to 24.04 Tcf, or 65.9 Bcf/d in 2011, representing what was then the highest production levels in U.S. history.<sup>36</sup> Increased drilling productivity has enabled domestic production to continue expanding despite a sharp reduction in capital deployed by industry in upstream development.<sup>37</sup>

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The ARI Resource Report was previously appended to a DOE an export application filed by Cheniere Marketing, LLC. See Cheniere Marketing, LLC, Application for Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Countries Ex. C, DOE/FE Docket No. 12-97-LNG (Aug. 31, 2012). A 2010 version of the ARI Resource Report was previously submitted by SPL. See Sabine Pass Liquefaction, LLC, Application for Long-Term Authorization to Export Liquefied Natural Gas Ex. D, DOE/FE Docket No. 10-111-LNG (Sept. 7, 2010).

See EIA, Natural Gas Annual\_2011, at 1 (January 2013), <a href="http://www.eia.gov/naturalgas/annual/pdf/nga11.pdf">http://www.eia.gov/naturalgas/annual/pdf/nga11.pdf</a>; EIA, Natural Gas Annual 2009, at 1 (December 2010), <a href="http://www.eia.gov/naturalgas/annual/archive/2009/pdf/nga09.pdf">http://www.eia.gov/naturalgas/annual/archive/2009/pdf/nga09.pdf</a>.

According to Baker Hughes, there were 380 rigs drilling for natural gas in the United States during the week ended August 30, 2013, a 56.9% decrease from the 883 rigs targeting natural gas during the week ended August 5. 2011, two years prior. *See* Baker Hughes, North American Rotary Rig Count, at <a href="http://media.corporate-property-based-left-http://media.corp

The robust outlook for future increases in domestic natural gas supply capacity has been reflected in several recent industry evaluations. Proved U.S. reserves of wet natural gas in 2011 expanded by 31.2 Tcf, or 9.8%, to 348.8 Tcf from the year before, according to the EIA, representing the largest quantity of domestic proved natural gas reserves in U.S. history.<sup>38</sup> Following an increase of 33.8 Tcf, or 11.9%, in proved gas reserves the year prior, U.S. proved natural gas reserves in 2010 and 2011 expanded by the largest and second-largest annual increase, respectively, since EIA began publishing proved reserve estimates in 1977.<sup>39</sup> The Potential Gas Committee of the Colorado School of Mines ("Potential Gas Committee") in April 2013 raised its prior estimates of the U.S. technically recoverable gas resource base by 486 Tcf, or 25.6%, to 2,384 Tcf at year-end 2012, the highest resource evaluation in the group's 48-year history.<sup>40</sup> Including 305 Tcf of established proved dry natural gas reserves as of year-end 2010, the Potential Gas Committee determined that the United States possesses future available gas supply of 2,688 Tcf.<sup>41</sup> Most of the increase arose from the Potential Gas Committee's reevaluation of gas plays in the Gulf Coast, Atlantic and Rocky Mountain areas.<sup>42</sup>

<u>ir.net/media\_files/IROL/79/79687/na/201309\_06/North\_America\_Rotary\_Rig\_Count\_Jan\_2000\_Current\_34ik\_hfhwoeir092347543dgrw.xlsb.</u>

See EIA, U.S. Crude Oil and Natural Gas Proved Reserves, 2011, at 1 (Aug. 2013), available at <a href="http://www.eia.gov/naturalgas/crudeoilreserves/pdf/uscrudeoil.pdf">http://www.eia.gov/naturalgas/crudeoilreserves/pdf/uscrudeoil.pdf</a>.

See EIA, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Proved Reserves, 2010, at 1 (Aug. 2012), available at http://www.eia.gov/naturalgas/crudeoilreserves/archive/2010/pdf/uscrudeoil.pdf.

See Press Release, Potential Gas Committee, Potential Gas Committee Reports Significant Increase In Magnitude of U.S. Natural Gas Resource Base, at 1, 2, 5 (Apr. 9, 2013), available at http://potentialgas.org/download/pgc-press-release-april-2013.pdf.

<sup>&</sup>lt;sup>41</sup> *See id.* at 2, 5.

<sup>42</sup> See id.

The EIA's recent Annual Energy Outlook 2013 ("AEO 2013") lends further support that the domestic natural gas resource base continues to expand rapidly.<sup>43</sup> AEO 2013 forecasts that domestic dry natural gas production will increase by an average 1.3% per year between 2011 and 2040, compared to expectations for long-term annual production growth of 1.0% in EIA's previous Annual Energy Outlook 2012 ("AEO 2012").<sup>44</sup> AEO 2013 predicts that U.S. dry natural gas production will total 33.14 Tcf (90.8 Bcf/d) by 2040, an increase of 10.14 Tcf (27.8 Bcf/d), or 44.1%, from production levels of 23.0 Tcf (63.0 Bcf/d) in 2011.<sup>45</sup>

The ARI Resource Report provides additional independent analysis of the unconventional natural gas resource base in the U.S. to supplement publicly available information on conventional onshore and offshore gas resources. ARI estimates that the U.S. possesses technically recoverable natural gas resources totaling 2,915 Tcf, including 1,904 Tcf of proved and technically recoverable unconventional gas resources plus 1,011 Tcf of recoverable conventional resources identified by EIA.<sup>46</sup> Of this total, 318 Tcf represent proved natural gas reserves and 2,597 Tcf comprise undiscovered or inferred resources.<sup>47</sup> Unconventional gasbearing formations account for 65.3% of technically recoverable domestic gas resources and include 1,219 Tcf of recoverable reserves from shale, 561 Tcf from tight sandstones, and 124 Tcf from coalbed formations.<sup>48</sup>

EIA, Annual Energy Outlook 2013 (April 2013), <a href="http://www.eia.gov/forecasts/aeo/pdf/0383(2013).pdf">http://www.eia.gov/forecasts/aeo/pdf/0383(2013).pdf</a> (last visited September 8, 2013) [hereinafter AEO 2013].

Compare EIA, AEO 2013 Table A13, Natural gas supply, disposition and prices, at 147 [hereinafter AEO 2013 Table A13] with EIA, Annual Energy Outlook 2012 Table A13 at 157 (June 2012), available at <a href="http://www.eia.gov/forecasts/aeo/pdf/0383(2012).pdf">http://www.eia.gov/forecasts/aeo/pdf/0383(2012).pdf</a>.

<sup>&</sup>lt;sup>45</sup> See AEO 2013 Table A13.

ARI, U.S. Natural Gas Resources and Productive Capacity: Mid-2012 (Aug. 23, 2012), at 10 Table II-1 [hereinafter ARI Resource Report].

<sup>&</sup>lt;sup>47</sup> *Id*.

<sup>&</sup>lt;sup>48</sup> *Id.* 

ARI's assessment of 2,915 Tcf of recoverable domestic natural gas reserves represents an increase of 330 Tcf, or 12.7%, from its resource estimate of 2,585 Tcf provided in August 2010.<sup>49</sup> The ARI Resource Report notes that estimates of recoverable natural gas in the U.S. have continued to grow due to (i) improvements in drilling and oilfield service technologies that have expanded the quantity of natural gas resources that can be commercially recovered in established unconventional basins; (ii) the addition of previously unidentified unconventional resources that have been demonstrated as productive through drilling and development activities;<sup>50</sup> and (iii) growth in estimates of associated natural gas resources in emerging unconventional fields rich in petroleum liquids.<sup>51</sup>

ARI's assessment of 2,915 Tcf of technically recoverable resources represents approximately 114 years of supply at recent domestic demand levels. Furthermore, ARI projects that technology gains will continue to drive production costs lower and augment recoverable natural gas reserves in the future. Remaining recoverable domestic unconventional gas resources, for example, are projected to increase 17.7%, or 216 Tcf by 2035 to 1,435 Tcf from their current assessment of 1,219 Tcf, due to steady improvements in well performance and technology progress. The cumulative quantity of exports requested pursuant to this Application would represent only 2.8% of the additional resources that ARI projects will be gained through technological progress over the course of the forecast period.

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Compare id. with ARI, U.S. Natural Gas Resources and Productive Capacity (Aug. 26, 2010), at 8 Table II-1.

ARI specifically identifies the Utica, Niobrara, Avalon, Wolfcamp and Woodford (Cana) formations as new plays that have been successfully delineated by exploratory drilling and demonstrated as productive, and therefore contribute to updated resource estimates since 2010. Other unconventional plays, including the Collingswood, Mancos, Baxter, Tuscaloosa and Brown Dense, are not included in current estimates but could be demonstrated as productive by future industry investment. *ARI Resource Report*, at 12.

<sup>&</sup>lt;sup>51</sup> *Id.* at 3.

<sup>&</sup>lt;sup>52</sup> *Id.* at 11.

The ARI Resource Report, the 2013 Potential Gas Committee resource assessment, EIA's AEO 2013, and other publicly available information demonstrate that the United States has sufficient natural gas resources available at modest prices to meet projected domestic demand over the next 25 years. Further, the ARI Resource Report establishes that the availability of new natural gas reserves is likely to continue expanding into the future as new unconventional formations are discovered and the oil and gas industry continues to improve drilling and extraction techniques.

#### 2. National Natural Gas Demand

In the AEO 2013 Reference Case, EIA predicts the domestic natural gas market to grow at a 0.7% annual rate through 2040, with demand projected to expand to 29.54 Tcf (80.9 Bcf/d) in 2040 from 24.37 Tcf (66.7 Bcf/d) in 2011.<sup>53</sup>

#### a. Industrial Sector

Consumption of natural gas by U.S. industrial end-users is projected to see modest expansion through 2040. The AEO 2013 Reference Case projects U.S. industrial sector demand will grow an average of 0.5% annually to total 7.9 Tcf (21.64 Bcf/d) in 2040 from 6.77 Tcf (18.55 Bcf/d) consumed in 2011.<sup>54</sup>

#### b. Residential and Commercial Sectors

EIA forecasts a contraction in future residential consumption of natural gas as customer growth is offset by efficiency gains and household migration to milder climates. U.S. residential

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<sup>&</sup>lt;sup>53</sup> See AEO 2013 Table A13.

<sup>&</sup>lt;sup>54</sup> *Id*.

natural gas demand is forecast in AEO 2013 to decline by an annual average of -0.5%, to 4.14 Tcf (11.3 Bcf/d) in 2040 from 4.72 Tcf (12.93 Bcf/d) in 2011.<sup>55</sup>

Commercial sector natural gas use is projected to experience modest annual growth of 0.4% in AEO 2013, reaching 3.60 Tcf (9.86 Bcf/d) in 2040 from 3.16 Tcf (8.66 Bcf/d) in 2011.<sup>56</sup>

#### c. Electricity Sector

Natural gas demand in the electric generating sector is forecast in AEO 2013 to increase by an average of 0.8% per year, expanding to 9.5 Tcf (26.03 Bcf/d) in 2040 from 7.6 Tcf (20.82 Bcf/d) in 2011.<sup>57</sup>

#### d. Transportation Sector

Natural gas consumed for residential and commercial transportation accounts for a small portion of domestic demand. In 2011, 32.25 Bcf of natural gas was used in the United States for vehicle fuel, or approximately 0.1% of the total domestic gas market.<sup>58</sup> From this small base, EIA in its AEO 2013 forecasts that transportation sector demand will grow 11.9% annually to 1.04 Tcf (2.85 Bcf/d) in 2040.<sup>59</sup>

#### 3. Supply-Demand Balance Demonstrates the Lack of National Need

Trends in the U.S. natural gas market make evident that there is little, if any, domestic need for the natural gas that would be exported as a result of the requested authorization. U.S. natural gas production has been growing at more than twice the rate of domestic demand growth

<sup>56</sup> *Id*.

<sup>&</sup>lt;sup>55</sup> *Id*.

<sup>&</sup>lt;sup>57</sup> *Id*.

See EIA, Natural Gas Consumption by End Use, <a href="http://www.eia.gov/dnav/ng/ng">http://www.eia.gov/dnav/ng/ng</a> cons sum dcu nus a.htm (last visited Sept. 8, 2013).

<sup>&</sup>lt;sup>59</sup> See AEO 2013 Table A13.

since 2005.<sup>60</sup> The inability of the U.S. market to absorb incremental supplies has slowed investments in natural gas development and forced the shut-in of actively producing wells in marginal natural gas fields,<sup>61</sup> creating spare capacity and non-productive resources.<sup>62</sup> These trends demonstrate that available natural gas reserves exceed current demand, and that future resources exist well in excess of projected long-term domestic needs.

The Reference Case of the AEO 2013 provides that domestic demand growth for natural gas will average 0.7% annually over the next 30 years, leading to a domestic market of 29.54 Tcf by 2040.<sup>63</sup> Over this same period of time, domestic natural gas production is projected to grow by 1.3% per year on average, or approximately twice the rate of growth in domestic natural gas demand.<sup>64</sup> The AEO 2013 forecast anticipates that the U.S. will become a net exporter of natural gas after 2020.<sup>65</sup> Domestic natural gas production is expected to exceed domestic consumption by 3.6 Tcf (9.86 Bcf/d) by 2040.<sup>66</sup> This surplus of deliverable supply in excess of foreseeable U.S. market demand demonstrates that resources are available for export and would not interfere with the public interest.

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Marketed production of natural gas grew by 5.1 Tcf from 2005 to 2011, to 24.0 Tcf from 18.9 Tcf, compared to growth of 2.3 Tcf in domestic consumption, to 24.3 Tcf from 22.0 Tcf, over the same six-year period. *Compare* EIA, *U.S. Natural Gas Marketed Production* at <a href="http://www.eia.gov/dnav/ng/hist/n9050us2a.htm">http://www.eia.gov/dnav/ng/hist/n9050us2a.htm</a> with EIA, *U.S. Natural Gas Total Consumption* at <a href="http://www.eia.gov/dnav/ng/hist/n9140us2a.htm">http://www.eia.gov/dnav/ng/hist/n9140us2a.htm</a> (last visited Sept. 8, 2013).

Numerous articles have documented the widespread shut-in of natural gas due to prices and later the impact on producers' reserves and valuations. See, e.g., Encana reverses loss, will shut in 600,000 Mcf/d, Gas Daily, Apr. 26, 2012, at 1; Chesapeake Slashes Gas Drilling, Production, Oil Daily, Jan. 24, 2012, at 1; Low U.S. natural gas price seen sapping reserves, valuations, Reuters, Jan. 18, 2013, available at <a href="http://www.reuters.com/article/2013/01/18/us-oilgas-reserves-idUSBRE90H07N20130118">http://www.reuters.com/article/2013/01/18/us-oilgas-reserves-idUSBRE90H07N20130118</a> (last visited Sept. 8, 2013).

Proved non-producing natural gas reserves totaled 118.2 Tcf in 2011, the largest ever recorded. *See* EIA, *Proved Nonproducing Reserves*, <a href="http://www.eia.gov/dnav/ng/ng\_enr\_nprod\_a\_EPG0\_R9908\_Bcf\_a.htm">http://www.eia.gov/dnav/ng/ng\_enr\_nprod\_a\_EPG0\_R9908\_Bcf\_a.htm</a> (last visited Sept. 8, 2013).

<sup>63</sup> See AEO 2013 Table A13.

<sup>&</sup>lt;sup>64</sup> *Id*.

<sup>&</sup>lt;sup>65</sup> *Id*.

<sup>&</sup>lt;sup>66</sup> *Id*.

The ARI Resource Report further establishes that available natural gas resources will exceed future domestic needs, and that spare productive capacity will remain available to meet future demand. The ARI Resource Report examines its natural gas resource assessment in the context of the EIA's demand Reference Case in AEO 2012 for the U.S. natural gas market through 2035. Using the AEO 2012 reference outputs and holding all other variables constant, ARI used its Technology Model for Unconventional Gas Supply to re-assess the outlook for domestic natural gas productive capacity in light of EIA's projected track for future U.S. natural gas prices.<sup>67</sup>

The substitution of ARI's productive capacity is appropriate given that EIA historically has underestimated the future contributions of unconventional gas to domestic markets. As recently as the Annual Energy Outlook 2010, EIA projected unconventional production from shale and coalbed wells would total less than 8 Tcf over the ensuing 25 years, a production level that was surpassed by over 1.5 Tcf the following year in 2011.<sup>68</sup> In its Annual Energy Outlook 2011, EIA predicted dry unconventional gas production from shale and coalbed wells of 6.94 Tcf in 2011, 27% lower than indicated by finalized wellhead data two years later.<sup>69</sup>

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<sup>67</sup> See ARI Resource Report, at 24.

Wellhead production from coalbed and shale gas wells totaled 10.28 Tcf in 2011, and on a dry converted basis is estimated at 9.56 Tcf in 2011. The EIA in the *Annual Energy Outlook 2010* forecast dry shale and coalbed gas production of 7.93 Tcf in 2035. See EIA, *Annual Energy Outlook 2010*, Table A14, *Oil and Gas Supply*, at 135 (April 2010), available at <a href="http://www.eia.gov/oiaf/archive/aeo10/pdf/0383(2010).pdf">http://www.eia.gov/oiaf/archive/aeo10/pdf/0383(2010).pdf</a> (last visited Sept. 8, 2013). Compare with Natural Gas Annual 2011 at 1, supra n.36 and AEO 2013, Table A14, Oil and Gas Supply at 148.

<sup>69</sup> Compare id. with EIA, Annual Energy Outlook 2011, Oil and Gas Supply, Reference case, available at <a href="http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2011&subject=0-AEO2011&table=14-AEO2011&region=0-0&cases=ref2011-d020911a">http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2011&subject=0-AEO2011&table=14-AEO2011&region=0-0&cases=ref2011-d020911a</a> (last visited Sept. 8, 2013).

ARI estimates U.S. unconventional gas productive capacity alone will grow to 86.3 Bcf/d in 2035 from 42.5 Bcf/d in 2011.<sup>70</sup> ARI subsequently merged its unconventional productive capacity findings with the AEO 2012 projections for conventional domestic dry production. The combined data demonstrate that U.S. natural gas productive capacity would grow to 103.0 Bcf/d in 2035 from 65.3 Bcf/d in 2011 at the future market price track forecast by EIA, an increase of 57.7%.<sup>71</sup> The rate of growth in domestic productive capacity would well exceed EIA expectations for future annual U.S. demand growth of 0.4% presented in its AEO 2012 Reference Case.<sup>72</sup> Under the modified supply case presented by ARI, domestic natural gas productive capacity would exceed projected U.S. demand in the AEO 2012 by 6.6 Bcf/d in 2015, 10.3 Bcf/d in 2025, and 27.3 Bcf/d in 2035.<sup>73</sup>

The ARI and other publicly-available information demonstrate that the U.S. has sufficient natural gas resources available at modest prices to meet projected domestic demand over the 22-year period requested by SPL in this Application. These reports establish further that the availability of new natural gas reserves is likely to continue expanding into the future as new unconventional formations are discovered and the oil and gas industry continues to improve drilling and extraction techniques. This anticipated future surplus of deliverable supply in excess of domestic needs demonstrates that the resources proposed for export by the Liquefaction Expansion Project are not required to meet domestic needs.

<sup>&</sup>lt;sup>70</sup> See ARI Resource Report, at 24.

<sup>&</sup>lt;sup>71</sup> *Id*.

<sup>&</sup>lt;sup>72</sup> See id. at 27, 30.

<sup>&</sup>lt;sup>73</sup> *Id.* at 25.

#### 4. *Price Impacts*

The natural gas industry has benefited in recent years from the completion of numerous econometric studies by EIA and other third-party analysts that project the impact on domestic natural gas markets that would result from future LNG exports. Most recently, the NERA Study concluded that initial price impacts associated with LNG exports would likely range from zero to \$0.33 per Mcf, and that the largest price impacts after five years of growing LNG exports would range from \$0.22 to \$1.11 per Mcf. The high end of this range would result from an extreme demand scenario under which large volumes of export capacity are added at a rapid rate owing to a global demand shock that occurs in conjunction with restrictions on supplies into the international market from other LNG-producing sources.<sup>74</sup>

Cheniere Energy has detailed several assumptions used in the NERA Study that serve to overstate the price impacts associated with LNG exports. Specifically, the NERA Study is calibrated based on the assumptions used by the EIA in its AEO 2011 for all modeling scenarios, including those for future domestic natural gas recovery costs, delivered prices and resource availability. The most updated forecast released by EIA as AEO 2013 indicates a more favorable market outlook compared to the AEO 2011, where greater volumes of future supply are available at lower prices to consumers and will support not only exports but additional domestic demand. Between 2013 and 2035, domestic gas production in AEO 2013 is projected to total 640.7 Tcf, or 16.1% greater than the cumulative production of 551.6 Tcf estimated in AEO 2011, while Henry Hub spot prices between 2013 and 2035 are estimated to

<sup>&</sup>lt;sup>74</sup> See NERA Study, at 42–44, 51, 76.

See Ltr. from Charif Souki, Chairman & CEO, Cheniere Energy, Inc. to Hon. Steven Chu, Sec'y, DOE 4–7 (Jan. 24, 2013), available at <a href="http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/mccallum\_george\_em01\_24\_13.pdf">http://www.fossil.energy.gov/programs/gasregulation/authorizations/export\_study/mccallum\_george\_em01\_24\_13.pdf</a>.

NERA Study, at 4.

average approximately \$4.66 per million Btu, a reduction of \$1.04, or 17.3%, compared to the average of the future price incorporated in the NERA Study. Domestic demand between 2013 and 2035 is projected to total 617.7 Tcf in AEO 2013, an increase of 5.6% compared to cumulative consumption of 584.9 Tcf estimated in AEO 2011 over the same period. The revisions to the outlook in AEO 2013 from AEO 2011 represent an additional 89.1 Tcf of cumulative domestic gas production over the 2013-2035 period, 171.7% more than the 32.8 Tcf upward adjustments in expectations for cumulative domestic consumption over the same period in the AEO 2013 forecast.

DOE has recognized that updates to the AEO 2013 "suggest domestic supply and demand conditions that are more favorable, not less favorable, to exports." AEO 2013 makes evident that larger volumes of natural gas have been identified and are available to meet consumer demand at lower prices than forecast by the NERA Study. It stands to reason that the increase in the price elasticity of U.S. supply evident between the AEO 2011 and AEO 2013 forecasts would result in lower price fluctuations associated with LNG exports or other forms of market expansion than suggested by the NERA study.

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Compare AEO 2013 Table A13, with AEO, Annual Energy Outlook 2011, Natural Gas Supply, Disposition and Prices, Reference case, available at <a href="http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2011&subject=0-AEO2011&table=13-AEO2011&region=0-0&cases=ref2011-d020911a">http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2011&subject=0-AEO2011&table=13-AEO2011&region=0-0&cases=ref2011-d020911a</a> (last visited Sept. 8, 2013).

<sup>&</sup>lt;sup>78</sup> *Id*.

<sup>&</sup>lt;sup>79</sup> See Lake Charles Exports, LLC, DOE/FE Order No. 3324, at 74–75 (Aug. 7, 2013).

#### **VERIFICATION**

State of	Teyas	)
County of	Harris	)

BEFORE ME, the undersigned authority, on this day personally appeared Patricia Outtrim, who, having been by me first duly sworn, on oath says that she is the Vice President, Governmental and Regulatory Affairs, for Cheniere Energy, Inc. and is duly authorized to make this Verification; that she has read the foregoing instrument and that the facts therein stated are true and correct to the best of her knowledge, information and belief.

Patricia Outtrim

SWORN TO AND SUBSCRIBED before me on the 9th day of September, 2013.

Name: Toni A. Bennett

TONI A BENNETT

My Commission Expires October 5, 2017

Title: Notary Public

My Commission expires:

October 5,2017