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To:	Moore, Larine
Subject:	FW: Comments on 2012 LNG Export Study - NERA - "Macroeconomic Impact of LNG Exports from the United States," Docket No. 2012-29894
Date:	Monday, January 28, 2013 11:40:16 AM
Attachments:	01.24.13_Comments on DOE NERA LNG Export Study.pdf

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From: Marnie Satterfield [mailto:MSatterfield@carbonleaf.net]
Sent: Thursday, January 24, 2013 3:24 PM
To: LNGStudy
Subject: Comments on 2012 LNG Export Study – NERA – "Macroeconomic Impact of LNG Exports from the United States," Docket No. 2012-29894

To Whom It May Concern:

Please see our attached comments on the 2012 LNG Export Study. I also submitted these comments via the Federal Register online.

Best,

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The Industrial Energy Consumers of America is a nonpartisan association of leading manufacturing companies with $1.1 trillion in annual sales, over 1,000 facilities nationwide, and with more than 1.4 million employees worldwide. It is an organization created to promote the interests of manufacturing companies through advocacy and collaboration for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete in domestic and world markets. IECA membership represents a diverse set of industries including: chemical, plastics, steel, aluminum, paper, food processing, fertilizer, insulation, glass, industrial gases, pharmaceutical, brewing, cement, agricultural equipment, and auto.

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The Voice of the Industrial Energy Consumers

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January 24, 2013

U.S. Department of Energy (FE-34)
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RE: 2012 LNG Export Study – NERA – "Macroeconomic Impact of LNG Exports from the United States," Docket No. 2012-29894

As companies whose competitiveness is dependent upon the affordability and availability of natural gas for fuel and feedstock, and natural gas-fired electricity, we raise great concerns regarding the quality of the NERA study entitled, "Macroeconomic Impact of LNG Exports from the United States."[1] The NERA study is flawed and cannot be used to determine whether or not LNG exports is "consistent with the public interest", and the study fails to compare the economic benefits of consuming the same quantities of natural gas domestically as exported under the study. Furthermore, the study indicates that exports of LNG will increase domestic prices, significantly damage energy intensive manufacturers, and shift the benefits to companies that own LNG export terminals and the oil and gas industry and reduce labor wages. The misguided analysis disparages the value and contributions of the energy intensive manufacturers to the country and uses out dated and incorrect information. The study follows the January 2012 DOE/EIA report entitled "Effects of Increased Natural Gas Exports on Domestic Energy Markets." Both studies rely on understated assumptions on domestic natural gas demand that results in understated price projections, and do not take into consideration a multiplicity of federal and state regulatory actions that can have the effect of accelerating demand and and/or slowing natural gas production. As is, neither study provides the quality of information necessary for decision making to address the question of whether or not exporting LNG to non-free trade countries is in the interest of the public.

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[1] W. David Montgomery, et al, "Macroeconomic Impacts of LNG Exports from the United States," NERA Consulting, December, 2012. Referred to hereafter as "NERA study."

The manufacturing sector is the largest consumer of natural gas, as a fuel and feedstock, and natural gas-fired electricity, consuming approximately 40 percent of all U.S. natural gas. As a result, it is paramount that IECA play an active role in working with the DOE and policymakers in general, to ensure that the "public interest" test evaluation for approval of non-free trade applications is done with a fair and transparent consideration of the impact to the manufacturing sector. There is a direct relationship between the price of natural gas and manufacturing competitiveness and jobs, as illustrated on Chart 1 in the appendix. When natural gas prices rise, employment falls.

A total of twenty-one companies have filed to export LNG and one has been fully approved. According to the DOE, if all were approved and shipments were made at those approved levels U.S. demand for natural gas would increase by 47.8 percent of 2011 demand (see appendix chart 2). We recognize that it is unlikely all proposed export facilities would be built.

The heart of the issue is whether exporting LNG to "non-free trade" countries is in the public interest. These are countries that do not want free-trade and discriminate against manufacturing products produced in the United States. Countries with "free trade agreements" are automatically approved by DOE to ship LNG. IECA takes the position that increased domestic consumption provides a better alternative with superior economic benefits for our abundant natural gas supply than exporting LNG.

It is important to note that IECA is not opposing LNG exports, although we remain very concerned that exports will impact manufacturing competitiveness and jobs. Both studies confirm one thing, that any level of exports will increase domestic prices, and that energy intensive manufacturing industries are most impacted. The volume of exports and the timing of when LNG terminals are approved and begin to ship are important policy decisions and can negatively impact the manufacturing renaissance that has now begun. If export terminals are approved and they begin to ship LNG over a longer period of time, the domestic market place may have time to adjust. On the other hand, approval of several terminals and shipments starting all at the same time could shock the domestic market and prices could spike for all U.S. consumers.

KEY POINTS

1. The NERA report fails to compare the economic benefits of consuming the same quantities of natural gas domestically as exported under this study.

In order for the DOE to approve shipments of LNG to non-free trade countries, each application to export must pass a "public interest" test. In other words, it must be in the public interest if we are to approve terminals that would then export LNG. The most elemental aspect of the public interest test is whether the public is helped or hurt by exports. Fundamental issues include impacts to natural gas prices, electricity prices, jobs, exports and economic growth.

On this account, the NERA study failed. It failed because it only looked at the economic pluses and minuses (albeit poorly) of exporting 6 bcfd, 12 bcfd, or unlimited export quantities. The study does not look at the economic pluses and minuses of using those same quantities of natural gas domestically. IECA claims that use of the natural gas domestically will have far more net benefits to the public than exporting as explained later in this report.

According to NAM, for every manufacturing job created there are five to eight more jobs created in the larger economy. In comparison, exporting LNG provides a narrow benefit to export terminal owners, the oil and gas industry and to landowners who receive royalty payments.

2. At the most basic level, the entire output of the NERA modeling is flawed, because it is "built off an attempt to replicate EIA's price path" from the EIA's January 2012 study that uses underestimated industrial, electricity and transportation sector demand and understated price impacts.

On page 200 of the NERA report, they explain the foundation on which the entire NERA modeling is based.

The report says, *"NERA's modeling of shifts in natural gas price, production, and demand are built off an attempt to replicate EIA's price path. This was an important step to ensure that the NERA model output was consistent with the EIA's model. Of particular importance was the ability to replicate EIA's natural gas prices as closely as possible since it is a key driver of macro economic impacts* [emphasis added]*."*

This means that NERA started with the price projections of the EIA's January 2012 report and worked backwards. The NERA modeling locks in EIA's price projections and massages its modeling of economic impacts to fit the fixed prices of the January 2012 report. The January 2012 report uses AEO 2011 projections that greatly understate industrial and electric sector natural gas demand, as will be discussed later in this document. If demand is understated then price is understated. <u>As a result, essentially all of the output of this study is wrong</u>.

3. NERA industrial sector natural gas demand and price forecasts are understated.

The reports use the EIA AEO 2011 demand forecast assumptions which indicate that industrial demand will increase from 7.19 Tcf in 2012 to 8.24 Tcf in 2020, a 1.05 Tcf increase. In reality, demand will be much larger. Manufacturing companies have announced some $95 billion in capital projects based upon the assumption of affordable and reliable supply of natural gas and natural gas-fired power, and new projects are being announced each month. Just these investments are estimated to increase industrial demand by 2.2 Tcf per year between now and 2018, twice the amount used in the NERA study. And, this does not account for the increased demand from existing manufacturing facilities. Industrial demand has already increased 14.6 percent since 2009 and is accelerating.

Furthermore, the data used by NERA projected that natural gas use in the industrial sector would grow by 1.46 quadrillion BTUs between 2010 and 2035. The latest EIA projections (AEO 2013) are that industrial demand will grow by 47 percent more than that, or by 2.15 quadrillion BTUs, over this period. This further confirms that the NERA demand assumptions are understated, which means that price impacts are understated.

The $95 billion in newly announced capital projects is information available publically to the DOE, EIA and NERA, yet no consideration was given to this accelerating demand for natural gas. Experts believe that this is just the beginning of the manufacturing renaissance the country needs for job creation and exports.

Below is a list of some of the projects that have been publically announced.

INDUSTRY TO INVEST $95 BILLION IN MANUFACTURING RENAISSANCE *Newly announced investments below to exceed 6 bcf/day*				
Chemicals and Fertilizer				
No.	**Company**	**Location**	**Date Online**	**Project Type**
1	Dow	St. Charles, LA	2012	Ethylene Restart
2	Dow	Freeport, TX	2017	New Ethylene
3	Westlake	Lake Charles, LA	2012	Ethylene Expansion
4	Williams Olefins	Geismar, LA	2013	Ethylene Expansion
5	INEOS	Chocolate Bayou, TX	2013	Ethylene Debottleneck
6	LyondellBasell	Laporte, TX	2014	Ethylene Expansion
7	Westlake	Lake Charles, LA	2014	Ethylene Expansion
8	Aither Chemicals	WV or PA or OH	2016	New Ethylene
9	Exxon Mobil	Baytown, TX	2016	New Ethylene
10	Chevron Phillips	Baytown, TX	2017	New Ethylene
11	Formosa	Point Comfort, TX	2017	New Ethylene
12	Braskem	WV	2017	New Ethylene
13	Sasol	Lake Charles, LA	2018	New Ethylene
14	Shell	PA	2018	New Ethylene
15	Eastman	Longview, TX	2012	Ethylene/Polypropylene Expansion
16	Indorama	Under Consideration	2018	New Ethylene
17	LyondellBasell	Channelview, TX	NA	Ethylene Expansion
18	Sabic	Under Consideration	NA	New Ethylene
19	Occidental/Mexichem JV	Ingleside, TX	2016	New Ethylene
20	PTT Global Chemical	Under Consideration	NA	New Ethylene
21	Orascom Construction	Beaumont, TX	2011	Ammonia Restart
22	Orascom Construction	Beaumont, TX	2012	Methanol Restart
23	Orascom Construction	Lee County, IA	2015	New Fertilizer
24	Potash Corp	Geismar, LA	2013	Ammonia Restart
25	Potash Corp	Augusta, GA	2013	Ammonia Expansion
26	Rentech Nitrogen	East Dubuque, IL	2013	Ammonia Expansion
27	Austin Powder	Mosheim, TN	2014	Ammonia Expansion
28	LyondellBasell	Channelview, TX	2014	Methanol Restart
29	Methanex	Geismar, LA	2015	Methanol Migration
30	CF Industries	Donaldsonville, LA	2015	Ammonia Expansion
31	CF Industries	Port Neal, IA	2015	Ammonia Expansion
32	Incitec Pivot	Under Consideration	NA	Ammonia Migration
33	Koch Fertilizer	Various	NA	Ammonia Expansion
34	LSB Industries	Pryor, OK	NA	Ammonia Restart
35	Dyno Nobel	Waggaman, LA	2015	New Ammonia
36	Celanese	Clear Lake, TX	2015	New Methanol
37	CHS Inc.	ND	2016	New Ammonia
38	Agrium	Under Consideration	2017	New Fertilizer
39	Dakota Gas	Beulah, ND	2016	New Fertilizer
40	ND Corn Growers Association	ND	NA	New Fertilizer
41	Ohio Valley Resources	Rockport, IN	2016	New Ammonia
42	Mosaic	St. James Parish, LA	2016	Ammonia Expansion
43	Dow	Freeport, TX	2015	New Propylene
44	Dow	Freeport, TX	2018	New Propylene
45	Eastman	Under Consideration	2015	New Propylene
46	Formosa	Point Comfort, LA	2016	New Propylene

47	LyondellBasell	Channelview, TX	2014	New Propylene
48	Mitsui	Ohio	2012	Propylene Expansion
49	Enterprise	Mont Belvieu, TX	2013	Propylene Expansion
50	Enterprise	Mont Belvieu, TX	2015	New Propylene
51	Exxon Mobil	Baytown, TX	2016	2 New Polyethylenes
52	Chevron Phillips	Old Ocean, TX	2017	2 New Polyethylenes
53	Eastman	Longview, TX	2012	EthylHexanol Expansion
54	Chevron Phillips	Baytown, TX	2014	New Hexene
55	Huntsman Chemical	McIntosh, AL	NA	Epoxy Expansion
56	INEOS	Gulf Coast	NA	Ethylene Oxide
57	Kuraray	Pasadena, CA	2014	EVOH Expansion
58	Lanxness	Orange, TX	NA	Nd-PBR
59	Lubrizol	Deer Park, TX	2015	Plastic Resins
60	Honeywell Specialty materials	Mobile, AL	2012	Adsorbents; Catalysts
61	Westlake	Geismar, LA	2013	New Chlor-Alkali
62	Dow-Mitsui JV	Freeport, TX	2013	New Chlor-Alkali
63	Molycorp	Mountain Pass, CA	NA	New Chlor-Alkali and rare earth metals mining
64	Formosa	Point Comfort, TX	2012	Chlorine/Caustic Soda
65	Formosa	Point Comfort, TX	2012	Ethylene Dichloride
66	Shintech	Plaquemine, LA	2012	VCM
67	Shintech	Plaquemine, LA	2012	Chlorine/Caustic Soda
68	Shintech	Plaquemine, LA	2012	PVC
69	Occidental	Jacksonville, TN	2013	Chlorine and Caustic Soda
70	Dow Agrosciences	Freeport, TX	NA	Herbicide
71	Mitsubishi Chemical Holdings Corp.	Freeport, TX	2017	Acrylic Resin
Steel & Aluminum				
72	Alcoa	Upper Burrell, PA	2012	Expansion
73	Alcoa	Lafayette, Indiana	2014	New
74	ArcelorMittal	Cleveland, OH	2012	Expansion
75	Carpenter Technology	Reading, PA	NA	Expansion
76	Carpenter Technology	Limestone County, AL	2013	New
77	Coilplus	North Carolina	2014	Expansion
78	Essar Steel	Nashwauk, MN	2015	New
79	Gerdau	St. Paul, MN	2014	New
80	Nucor	Blytheville, AK	2014	Expansion
81	Timken	Canton, OH	2014	Expansions
82	United States Steel	Lorain, OH	Completed 10/12	Expansions
83	United States Steel	Leipsic, OH	NA	New Steel
84	Metal-Matic	Middleton, OH	2012	Expansion
85	Vallourec and Mannesmann	Youngstown, OH	NA	New
86	Welspun	Little Rock, AK	NA	Expansion
87	Nucor	St. James Parish, LA	2013	New
88	Voestalpine	Under Consideration	NA	Iron
89	Borusan Mannesman	Under Consideration	2014	Steel Pipe
Tires				
90	Bridgestone	Aiken, SC	2014	New off-road radial tire/expansion passenger/light truck tire
91	Continental	Sumter, SC	2013 start/2021 full capacity	Passenger and light truck tires
92	Michelin	Anderson, SC	2015	Earthmover tires (OTR)
93	Bridgestone	Bloomington, IL	2013	OTR Tires

Plastics				
94	M&G Group	Corpus Christi, TX	NA	New PET Plant
95	M&G Group	Corpus Christi, TX	NA	New PTA Plant
96	Huntington Foam	Greenville, MI	NA	Expansion
97	JM Eagle	Sunnyside, WA and Meadville, PA	NA	Polyethylene expansion
98	Springfield Plastics	Auburn, IL	2012	Polyethylene expansion
99	Kyowa America	Portland, TN	NA	Plastic Injection Molding
100	Lanxess	Gastonia, NC	Opened 9/12	Plastic
Natural Gas to Liquids				
101	Shell	LA or TX	NA	New
102	Sasol	LA	2018	New
103	Calumet Specialty Products Partners	Karns City, PA	2014	New
Glass				
104	Sage	Fairbaul, MN	Opened 9/12	Dynamic; Electrochromic Glass
Transportation & Transportation Equipment				
105	Caterpillar	Athens, GA	NA	Tractors and Excavators
106	Airbus	Mobile, AL	2015	Airplanes
107	Honda Motor Co.	Anna, OH	2012	Advanced Transmission Components

(Current as of January 2013)

4. NERA electricity generation sector natural gas demand and price forecasts are understated.

The NERA report uses EIA AEO 2011 demand forecast assumptions that indicate that electricity demand for natural gas will remain unchanged from the 2012 levels of 6.8 Tcf to 6.84 Tcf per year in 2020. The EIA forecast does not make common sense because of the significant EPA regulations that have been announced or pending, all of which will drive increased use of natural gas for power generation.

Electricity sector natural gas demand has increased every year since 2000, except for two years of economic recession. According to the EIA, demand has risen from 5.2 Tcf in 2000 to 7.5 Tcf in 2011, or 44 percent – an annual average increase of 4.0 percent. Due to the combination of low natural gas prices and EPA regulations directed toward coal-fired power plants, this increased use of natural gas will continue.

The EPA Electric Utility MAT regulation directed at coal-fired power units is just now starting to be implemented over the next four years. As of January 10, 2013, 46,119 MW of coal-and oil-fired power generation capacity have announced retirement, with more on the way.[2] Retirement projections that imply continued coal to natural gas fuel switching include: the Federal Energy Regulatory Commission at 81 GW; North American Electric Reliability Corporation at 33-77 GW; and EIA at 45-73 GW.

ALL COAL UNITS THAT ARE CLOSING[3]

Closing	MW	# of Units Closing
Ohio	6,852	38
Georgia	3,597	16

[2] "Coal Unit Shutdowns," American Coalition for Clean Coal Electricity (ACCCE), January 10, 2013

[3] This list is current as of January 10, 2013. Most of the coal units listed in the table are closing; a few are converting to either biomass or natural gas.

Pennsylvania	3,341	23
Virginia	2,831	21
North Carolina	2,785	26
West Virginia	2,737	18
Indiana	2,317	16
Kentucky	1,981	9
Illinois	1,976	13
South Carolina	1,838	21
Alabama	1,686	10
Nevada	1,580	2
Tennessee	1,558	12
Texas	1,399	3
Washington	1,376	2
Colorado	1,172	11
Wisconsin	873	18
Florida	869	2
Oregon	585	1
Louisiana	575	1
New Mexico	560	3
Oklahoma	460	1
Minnesota	387	6
New York	367	2
Delaware	360	4
Iowa	323	17
Massachusetts	308	3
New Jersey	291	3
Utah	272	5
Connecticut	181	1
Montana	154	1
Maryland	115	2
Michigan	103	1
California	96	2
Kansas	92	2
Missouri	55	3
Wyoming	45	4
South Dakota	22	1
38 States	**46,119 MW**	**324 Units**

Other EPA regulations that will drive additional coal-fired power plant retirement include:

National Ambient Air Quality Standards for:

- Ozone - Proposal due 2103, final due 9/14
- Sulfur Dioxide (SO2) - Final 6/10
- Nitrogen Dioxide (NO2) - Final 2/10
- Particulate Matter (PM) - Final 12/12
- Cross State Air Pollution Rule (CSAPR) - Vacated 8/12, rehearing requested
- GHG Rules - Upheld DC Court of Appeals 6/12
- Endangerment Finding - Rehearing denied 12/12
- GHG Tailoring Rule - Final

New Source Performance Standards for:

- GHG for new power plants - Proposed 4/12, final due 3/13
- GHG for existing plants - Unknown, subject to Consent Decree
- National Emissions Standards for Hazardous Air Pollutants (NESHAP)
- Mercury Air Toxics Standards - Final 2/12, new units in reconsideration
- Coal Combustion Residuals Rule - Proposed 6/10, final due 6/13
- Cooling Water Intake Rule [316(b)] - Proposed 4/11, final due 5/13
- Power Plant Effluent Limitation Guidelines - Proposal 4/13, final 4/14
- Greenhouse Gas NSPS for refineries – Required action by EPA under the CAA
- Greenhouse Gas NSPS for industrial facilities – Required action by EPA under the CAA

5. NERA Understates demand by the transportation sector.

NERA AEO 2011 forecasted only a slight increase in demand increasing from 0.1 bcf/d to 0.2 bcf/d from 2013 to 2020. One only needs to read the daily paper to recognize that there is an incredible shift occurring in the conversion of truck fleets from diesel to natural gas. This major shift has been recognized and reported on by major research organizations like CERA, Wood Mackenzie and many others. CERA reports a potential increase from 0.2 to 1.5 bcf/d, a 650 percent increase by 2020, a substantial increase from the NERA demand assumption. Now, other transportation subsectors, such as railroads and ships are considering conversion to natural gas as well.

6. NERA claims that the most vulnerable industries (EITEs) are not important industries – and concludes that exports are a superior economic option for the U.S. without doing a comparison.

Of the 216 pages of the NERA report, two pages of analysis are devoted to the impact of what NERA describes as the sector of the economy most impacted by LNG exports, namely the energy intensive trade exposed industries (EITEs). This is hardly a sufficient analysis for a sector of the economy that provides the "building block" of manufacturing commodities from which literally all other manufactured products are produced (see appendix chart 3). Putting it differently, every other industry in the country is dependent upon EITE industry products to produce "their" products.

Literally everything that we as consumers use daily cannot be produced without what is referred to as Energy Intensive Trade Exposed (EITI) products (see appendix charts 4 & 5). Even the food that we consume is produced using nitrogen fertilizer, an energy intensive natural gas consuming product.

According to the Bureau of Labor Statistics (BLS), in 2011, energy-intensive trade exposed industries employ 1,800,974 people and operate 38,909 facilities. In direct conflict with the NERA report, the BLS states that from 2000 to 2011, EITE industries value-added index increased by 35.6 percent versus "all" manufacturing, that increased at only 28.4 percent. According to the International Trade Administration, from 2000 to 2011, EITE industries exports rose by 159 percent, faster than "all" manufacturing at just 95 percent. And, from 2009 to 2011, EITE industries increased exports by 40.5 percent while "all" manufacturing increased by 39 percent. EITE exports in 2011 were nearly $305B. To us, these sound like very important industries.

These government statistics illustrate that EITE industries are a major contributor to the economy that continues to grow and outperform manufacturing in general. And, we believe with abundant low cost natural gas, we can continue to accelerate growth. NERA's narrow LNG export promoting focus uses old and incorrect EITE data and insufficient analysis to make their conclusions. NERA's failure to use and analyze this up-to-date government data in the LNG export report significantly damages the credibility of the report. Their analysis starts on page 68 of the report.

Another illustration of how little NERA evaluated the impact on the manufacturing sector is on page 60 of the report – where the industrial sector is described as a "modest consumer of natural gas." In fact, the industrial sector consumes about 40 percent of U.S. natural gas, and that volume is rapidly increasing. Industrial demand for natural gas increased 14.6% since 2009. We consume about 33% of the natural gas directly, and consume about 25% of the U.S. electricity, of which over 30% is generated from natural gas. We estimate the industrial sector consumes at least another 8% of the nation's gas via electricity that we consume.

7. The NERA study fails to consider new regulations and (associated risks to the public) that could reduce natural gas production or increase costs.

The study assumes that there are no limitations to the production of U.S. natural gas and does not consider the headwinds of existing, proposed or likely public policy that may confront increased production. Given these head winds, it is not reasonable to believe that domestic production will not be impacted by a host of new and proposed regulations and public policy decisions that could slow production and or increase its costs and limit access to shale natural gas fields.

Public policy issues that could slow production or increase costs include:

A. Intangible Drilling Costs (IDCs) tax provision:
The IDC allows the oil and gas industry to deduct expenses and generate the cash flow needed to invest in drilling. If Congress took this provision away, capital available to drill could drop by up to one-third. Production of natural gas would drop precipitously and prices would rise quickly.

B. U.S. Department of the Interior, Bureau of Land Management (BLM) proposed rule to regulate hydraulic fracturing on federal lands:
The BLM rule will slow permitting, slow-down drilling and increase costs that will be passed onto consumers.

C. EPA Regulation of Hydraulic Fracturing on private lands:
The EPA leads an interagency task force that has undertaken a study that will be released in 2014 that specifically examines environmental aspects of drilling and use of hydraulic fracturing on private lands. The study especially explores the potential for water contamination above and below the surface and potential impacts and risks to entire water sheds. The EPA may find legitimate reasons to justify the regulation of hydraulic fracturing and to potentially limit drilling in areas with vulnerable water sheds. Both would have negative impacts to natural gas production and supply as well as prices.

8. EIA LNG Export Study of January 2012 "Summary of Results" show that increased exports lead to higher natural gas and electricity prices, reduced domestic demand, that in part is used to supply the export market.

The first study conducted by the EIA on LNG exports and the basis for the NERA study makes several revelations that should give policy makers pause, especially those who wish to fast track LNG export terminal approvals. The study summary clearly says that not only do domestic prices increase under all export volume scenarios, it makes two other startling conclusions. The first is that domestic consumption falls because of higher prices and the second is that the reduced domestic consumption (demand destruction) would contribute to the supply of a portion of the 30 or 40 percent of the supply to exports. A minor portion of the export volume would be supplied from Canada via pipeline. Only 60 to 70 percent of the export demand will come from increases in domestic production.

Destroying domestic demand through higher prices and using the reduced demand to supply exports (other countries) is not sound public policy. The actual report language is below.

Summary of Results (from page 6)[4]*:*
Increased natural gas exports lead to higher domestic natural gas prices, increased domestic natural gas production, reduced domestic natural gas consumption, and increased natural gas imports from Canada via pipeline.

Impact Overview

- ***Increased natural gas exports lead to increased natural gas prices.*** *Larger export levels lead to larger domestic price increases, while rapid increases in export levels lead to large initial price increases that moderate somewhat in a few years. Slower increases in export levels lead to more gradual price increases but eventually produce higher average prices during the decade between 2025 and 2035.*

- ***Natural gas markets in the United States balance in response to increased natural gas exports largely through increased natural gas production.*** *Increased natural gas production satisfies about 60 to 70 percent of the increase in natural gas exports, with a minor additional contribution from increased imports from Canada. Across most cases, about three-quarters of this increased production is from shale sources.*

- ***The remaining portion is supplied by natural gas that would have been consumed domestically if not for the higher prices.*** *The electric power sector accounts for the majority of the decrease in delivered natural gas. Due to higher prices, the electric power sector primarily shifts to coal-fired generation, and secondarily to renewable sources, though there is some decrease in total generation due to the higher price of natural gas. There is also a small reduction in natural gas use in all sectors from efficiency improvements and conservation.*

- ***Even while consuming less, on average, consumers will see an increase in their natural gas and electricity expenditures.*** *On average, from 2015 to 2035, natural gas bills paid by end-use consumers in the residential, commercial, and industrial sectors combined*

[4] U.S. Energy Information Administration, "Effects of Increased Natural Gas Exports on Domestic Energy Markets," January 2012

increase 3 to 9 percent over a comparable baseline case with no exports, depending on the export scenario and case, while increases in electricity bills paid by end-use customers range from 1 to 3 percent. In the rapid growth cases, the increase is notably greater in the early years relative to the later years. The slower export growth cases tend to show natural gas bills increasing more towards the end of the projection period."

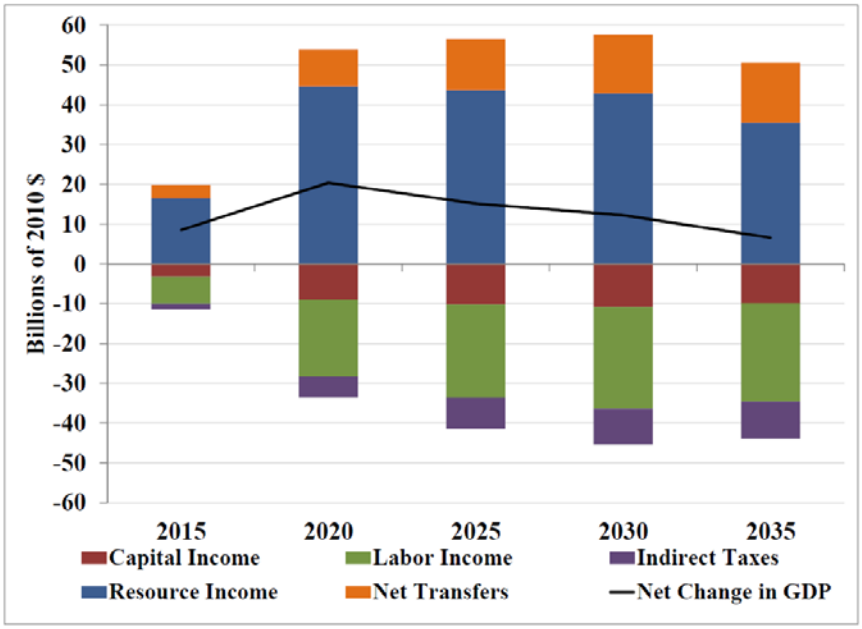
9. The NERA report confirms that all sectors of the economy are harmed.

The NERA report confirms that all sectors of the economy are harmed, other than the oil and gas sector. The report makes clear that the benefits of low cost natural gas are transferred to the oil and gas sector and especially owners of export terminals.

On page 7 of the NERA report, it reads:
"Expansion of LNG exports has two major effects on income: it raises energy costs and, in the prices, depresses both real wages and the return on capital in all other industries, but it also creates two additional sources of income. First, additional income comes in the form of higher export revenues and wealth transfers from incremental LNG exports at higher prices paid by overseas purchasers. Second U.S. households also benefit from higher natural gas resource income or rents."

On page 8, Figure 3 illustrates that by 2020, LNG exports provide only a net benefit to the economy of about $20 billion per year (see black line), a trivial amount to a $14 trillion dollar economy and drops to about only $5 billion per year by 2035. Note that there is a substantial net loss of real income to wage earners, amounting to tens of billions per year and less investment by all other industries.

Figure 3: Change in Income Components and Total GDP in USREF_SD_HR (Billions of 2010$)



IECA REQUESTS TO DOE

Among the other things needed to evaluate the impact of LNG exports on the U.S., IECA requests that a redo of the DOE study should take into consideration each of the following items:

1. Proprietary economic models, such as that used by NERA Economic Consultants (NERA) should not be used for public policy decisions. Public policy decisions demand the trust and integrity of economic models that have stood the test of time and been peer reviewed. The Office of Management and Budget "Final Information Quality Bulletin for Peer Review," filed in the Federal Register on January 14, 2005, stipulates that proprietary models/data that are not peer reviewed cannot be used in public policy decision making. NERA's model does not meet that test. We encourage the DOE to use EIA for all modeling. In this way, the public knows that trusted experienced public servants that do not have an agenda, are conducting the analysis.

2. Compare the economic benefits of consuming the same quantities of natural gas domestically as exported under the study. The public interest test for shipment to non-free trade countries is a public policy decision based on comparisons of how the public will be impacted. The public interest test is incomplete without first comparing impacts/benefits of exports versus impacts/benefits of greater domestic consumption. There is just as much potential new domestic demand that can occur as compared to the exports of LNG.

3. Use up-to-date demand forecasts for the industrial, electric generation and transportation sectors. For industrial demand, use current and prudent publically available data on announced capital investments that will rely upon natural gas in the forecasts and update employment data.

4. For the industrial, electric generation and transportation industries, include scenarios of impacts to natural gas demand due to existing, pending (proposed/courts) and anticipated federal and state regulations.

5. For the oil and gas industry, include scenarios of impacts to natural gas demand due to existing, pending (proposed/courts) and anticipated federal and state regulations on production of natural gas.

6. Given that approval of export terminals permits are for 20 to 30 year time periods, and the difficulty of forecasting supply, demand and price over such a long period of time, we encourage the DOE to use EIA's natural gas price forecasting history data base to provide a plus or minus (+/-) price factor to the LNG export scenario forecasted prices, a price sensitivity analysis. The EIA has an existing data base that compares their history of price forecasting to what really happened. Using a price sensitivity analysis based on past experience can illustrate the degree of potential accuracy of the LNG export price impacts over a 20 to 30 year period and provide great insight into relative price uncertainty.

7. The NERA study concluded that everyone will pay higher prices for natural gas and electricity but that the most vulnerable sector was the energy intensive trade exposed (EITEs) industries. NERA then erroneously concluded that EITE industries are not important so it doesn't really matter if those jobs are lost. We urge the DOE to study the economic and job creation "value-chain" of natural gas consumption by the EITE industries, to their domestic customers, and to

the export of their finished goods – in comparison to exporting specific volumes of natural gas. In this evaluation, DOE must consider that the economics of these industries has changed dramatically because of favorable domestic natural gas and electricity prices and they have a decided competitive advantage over imports. DOE is to use up-to-date EITE competitive market assessments as part of this work.

8. Both DOE studies failed to evaluate peak demand scenarios and potential regional limitations on storage and pipeline capacity on price. As the DOE re-evaluates price impacts of LNG exports, it needs to include scenarios that consider the impacts of U.S. LNG exports during winter and/or summer peak demand periods. This is a reasonable request given that most of the countries that would import LNG from the U.S. are in the northern hemisphere, which means that their LNG demand will be high during the U.S. winter heating season demand and could cause costly price spikes.

Secondly, regional infrastructure such as storage and pipeline capacity needs to be evaluated. The capacity of such infrastructure on a regional basis can have a significant impact on the natural gas basis pricing as we are experiencing today in the north east. For example, the EIA reported "spot prices of natural gas for delivery between Saturday, January 19 and Tuesday, January 22 exceeded $14 per million British thermal units (MMBtu) at some Northeast locations. This is about four times higher than the $3.54 price for the same delivery period reported at Henry Hub, the benchmark location for pricing natural gas in the United States." As new natural gas-fired power generation plants, new industrial facility demand and export terminal demand are all dependent upon the same infrastructure, prices will rise and accelerate the potential for price spikes.

In closing, we urge the DOE to continue to take its role of addressing the "public interest" test in considering approval of each non-free trade LNG export facility very seriously, and improve the quality of analytical research. We must remember that natural gas is different than other trade product issues. Other individual products and even other energy commodity products like coal and oil do not have as significant direct and indirect impact on peoples' lives, their safety, economic growth, exports of manufactured products and jobs as natural gas does.

Sincerely,

Paul N. Cicio
President

APPENDIX

CHART 1

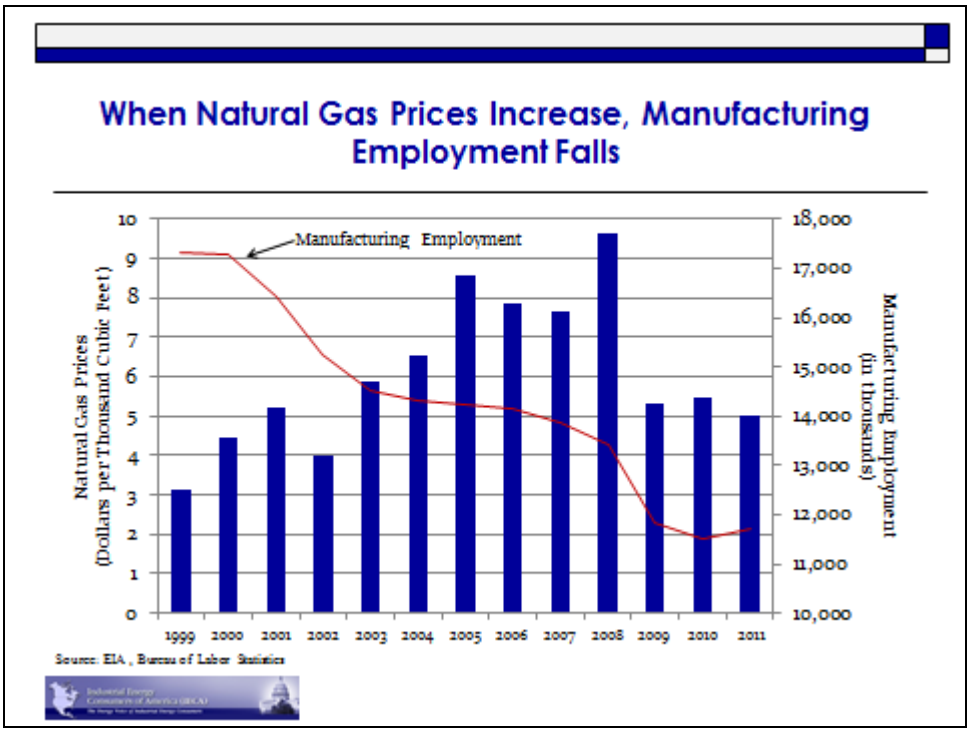


CHART 2

NATURAL GAS EXPORT APPLICATIONS

(Updated January 11, 2013)

NO.	NAME	EXPORT DESTINATION	LOCATION	SIZE OF EXPORTS	DATE FILED	DATE APPROVED
1	Sabine Pass LNG Terminal	Free Trade Nations	Sabine, LA	803 bcf/year over a 30-year period	08/11/10	09/07/10
	Sabine Pass LNG Terminal	Non-Free Trade Nations	Sabine, LA	803 bcf/year over a 30-year period	10/12/10	05/20/11
2	Lake Charles Exports, LLC	Free Trade Nations	Lake Charles, LA	730 bcf/year over a 25-year period	05/06/11	07/22/11
	Lake Charles Exports, LLC	Non-Free Trade Nations	Lake Charles, LA	730 bcf/year over a 25-year period	05/06/11	Pending
3	Carib Energy LLC	Free Trade Nations	Southeast Atlantic, FL, Gulf Coast	10.95 bcf/year over a 25-year period	06/06/11	07/27/11
	Carib Energy LLC	Non-Free Trade Nations	Southeastern United States, Gulf Coast	3.65 bcf/year over a 25-year period	10/20/11	Pending
4	Jordan Cove Energy Project	Free Trade Nations	Coos Bay, OR	438 bcf/year over a 30-year period	09/22/11	12/07/11
	Jordan Cove Energy Project	Non-Free Trade Nations	Coos Bay, OR	292 bcf/year over a 25-year period	03/23/12	Pending
5	Cameron LNG LLC (Sempra)	Free Trade Nations	Cameron, LA	620.50 bcf/year over a 20-year period	11/10/11	01/17/12
	Cameron LNG	Non-Free	Cameron, LA	620.50 bcf/year over a	12/21/11	Pending

	LLC (Sempra)	Trade Nations		20-year period		
6	Dominion Cove Point, LP	Free Trade Nations	Calvert County, MD	365 bcf/year over a 25-year period	09/01/11	10/07/11
	Dominion Cove Point, LP	Non-Free Trade Nations	Calvert County, MD	365 bcf/year over a 25-year period	10/03/11	Pending
7	Freeport LNG, LLC	Free Trade Nations	Freeport, TX	511 bcf/year over a 25-year period	12/17/10	02/10/11
	Freeport LNG, LLC	Non-Free Trade Nations	Freeport, TX	511 bcf/year over a 25-year period	12/17/10	Pending
8	Freeport LNG, LLC	Free Trade Nations	Freeport, TX	511 bcf/year over a 25-year period	01/12/12	02/10/12
	Freeport LNG, LLC	Non-Free Trade Nations	Freeport, TX	511 bcf/year over a 25-year period	12/19/11	Pending
9	Gulf Coast LNG Export, LLC	Free Trade Nations	Brownsville, TX	1022 bcf/year over a 25-year period	01/10/12	10/16/12
	Gulf Coast LNG Export, LLC	Non-Free Trade Nations	Brownsville, TX	1022 bcf/year over a 25-year period	01/10/12	Pending
10	Gulf LNG Liquefaction	Free Trade Nations	Pascagoula, MS	547.50 bcf/year over a 25-year period	05/02/12	06/15/12
	Gulf LNG Liquefaction	Non-Free Trade Nations	Pascagoula, MS	547.50 bcf/year over a 20-year period	08/31/12	Pending
11	LNG Development Company	Free Trade Nations	Warrenton, OR	456.25 bcf/year over a 30-year period	05/03/12	05/31/12
	LNG Development Company	Non-Free Trade Nations	Warrenton, OR	456.25 bcf/year over a 25-year period	07/16/12	Pending
12	SB Power Solutions	Free Trade Nations	Atlantic Coast	25.55 bcf/year over a 25-year period	05/07/12	06/15/12
13	Southern LNG Company	Free Trade Nations	Savannah, GA	182.50 bcf/year over a 25-year period	05/15/12	06/15/12
	Southern LNG Company	Non-Free Trade Nations	Savannah, GA	182.50 bcf/year over a 20-year period	08/31/12	Pending
14	Excelerate Liquefaction	Free Trade Nations	Calhoun County, TX	503.70 bcf/year over a 20-year period	05/25/12	08/09/12
	Excelerate Liquefaction	Non-Free Trade Nations	Calhoun County, TX	503.70 bcf/year over a 20-year period	10/05/12	Pending
15	Golden Pass Products, LLC	Free-Trade Nations	Sabine Pass, TX	949 bcf/year over a 25-year period	08/17/12	09/27/12
	Golden Pass Products, LLC	Non-Free Trade Nations	Sabine Pass, TX	949 bcf/year over a 25-year period	10/25/12	Pending
16	Cheniere Marketing, LLC	Free Trade Nations	Corpus Christi, TX	766.50 bcf/year over a 25-year period	08/31/12	10/16/12
	Cheniere Marketing, LLC	Non-Free Trade Nations	Corpus Christi, TX	766.50 bcf/year over a 22-year period	08/31/12	Pending
17	Main Pass Energy Hub, LLC	Free Trade Nations	16 miles offshore of LA	1,175.30 bcf/year over a 30-year period	09/11/12	01/04/13
18	CE FLNG, LLC	Free Trade Nations	Plaquemines Parish, LA	390.55 bcf/year over a 30-year period	09/12/12	11/21/12
	CE FLNG, LLC	Non-Free Trade Nations	Plaquemines Parish, LA	390.55 bcf/year over a 30-year period	09/12/12	Pending
19	Waller LNG Services, LLC	Free Trade Nations	Cameron, LA	58.40 bcf/year over a 25-year period	10/12/12	12/20/12

20	Pangea LNG (North America)	Free Trade Nations	Ingleside, TX	398.50 bcf/year over a 25-year period	11/29/12	Pending
	Pangea LNG (North America)	Non-Free Trade Nations	Ingleside, TX	398.50 bcf/year over a 25-year period	12/19/12	Pending
21	Magnolia LNG, LLC	Free Trade Nations	Lake Charles, LA	197.10 bcf/year over a 25-year period	12/18/12	Pending

Source: EIA

TOTAL = 10,661 Bcf/year (29.21 Bcf/day or 10.661 Tcf/year)

- **U.S. natural gas consumption in 2011 was 22.3 Tcf**
  - **10.661 Tcf is 47.8% of 2011 demand**

CHART 3

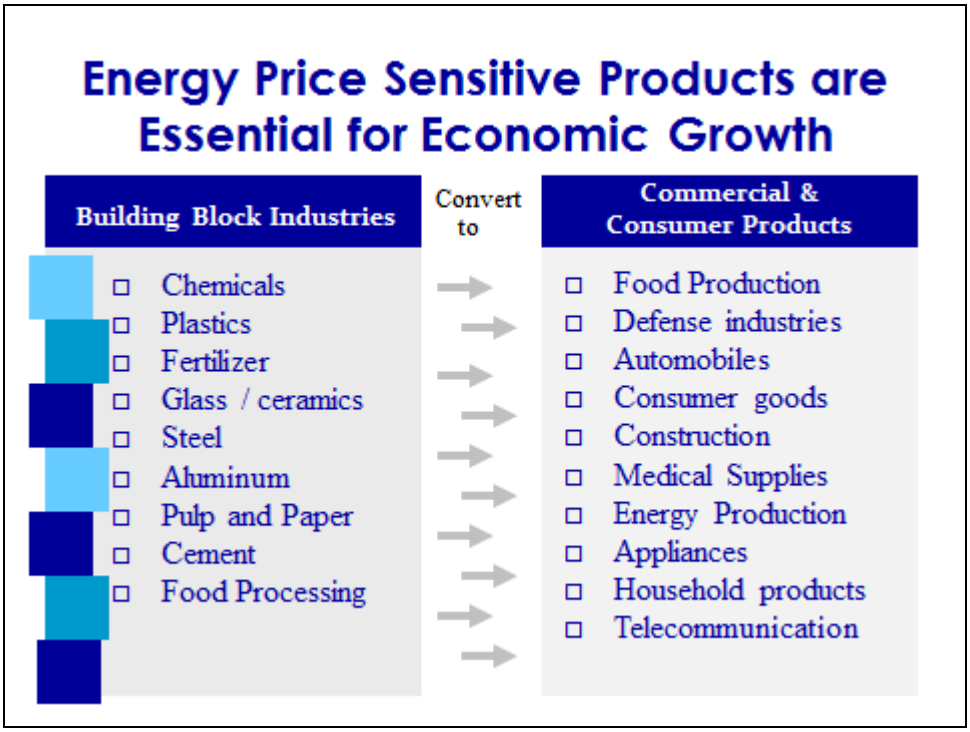


CHART 4

CHART 5