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Comments on Office of Fossil Energy of the US Department of Energy
The Macroeconomic Impact of increasing U.S. LNG Exports, Oct 29. 2015
(2015 LNG Export Study)

Comments submitted online Feb 12, 2016

Attention:
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Mr. Smith, Mr. Myers and Ms. Bernstein,

Thank you for this opportunity to comment on both the "Effects of Increased Levels of LNG Exports on U.S. Energy Markets" (2014 EIA LNG Export Study) and "The Macroeconomic Impact of increasing U.S. LNG Exports" (2015 LNG Export Study) each of which examine the cumulative impacts of liquefied natural gas (LNG) exports. Specifically, we will address our comments to the **2015 LNG Export Study** in this letter and submit a second letter with comments on the 2014 EIA Export Study.

One of the difficulties as you are no doubt well aware is that modeling rarely is able to take on all the real life factors that can influence markets, policies and changing awareness. The 2015 LNG Study was issued on October 29, 2015 and while significantly more comprehensive than the 2014 EIA LNG Export Study, it also falls short in several key places to accurately identify factors that have and will continue to influence LNG supply, projected demand and most importantly the bottom line of U.S. GDP.

Key Findings in the initial pages of the report included:

- The overall macroeconomic impacts of higher LNG exports are marginally positive, a result that is robust to alternative assumptions for the U.S. natural gas market. With external demand for U.S. LNG exports at 20 billion cubic feet per day (Bcf/d), the impact of increasing exports from 12 Bcf/d is between 0.03 and

0.07 percent of gross domestic product (GDP) over the period of 2026–2040, or $7–$20 billion USD annually in today's prices. (*2015 LNG Export Study, page 8)*

- As exports increase, the spread between U.S. domestic prices and international benchmarks narrows. In every case, greater LNG exports raise domestic prices and lower prices internationally. The majority of the price movement (in absolute terms) occurs in Asia*.(2015 LNG Export Study, page 8)*

While selling natural gas at higher prices on the world market would increase profits for U.S. gas producers, the narrowing of the price gap between the United States and the rest of the world would erode some of the benefits that have accrued to U.S. consumers and manufacturers. Considering these potential tradeoffs, this paper examines whether it is ultimately economically advantageous for the United States to export LNG between 12 and 20 Bcf/d. *.(2015 LNG Export Study, page 9)*

Of note, is the acknowledgement in this report that years 2016-2025 are virtually flat lined due to the glut of LNG currently on the market. Around 2026 the report predicts that the supply and demand of LNG will be more in line, but even so, a relatively small positive GPD of $7 to $20 billion annually is predicted. Additionally, to make these determinations, key assumptions were made:

Note that the scenarios are constructed so that there is sufficient international demand to support commercially viable LNG export flows from the United States in accordance with the volumes indicated in each case. Thus, various assumptions are make about the internationals natural gas market so as to stimulate investment in the U.S. upstream sector and the commensurate development of LNG export infrastructure. (*2015 LNG Export Study, page 26)*

Some of these assumptions were:

"Chinese gas demand rises in response to policies to limit coal use; Japanese nukes remain offline; Only the United States has expansion capability beyond 2020; No future expansions capabilities in selected locations; No future expansions of Central Asian pipelines to China; Russia-China pipeline supply agreements dissolve." (*2015 LNG Export Study, page 29)*

Significant ongoing changes, even in the last four months, have undermined and call into question many of these assumptions further pointing out the danger of relying on results from any study to accurately predict demand that would warrant increasing U.S. LNG Exports to 20 cfb/d.

Like previous commenters, including our Oregon Senator Wyden, who objected to DOE/FE using the flawed 2012 Nera Study to determine "public interest" and guide DOE/FE's approval of LNG Export terminals, we also vehemently object to using this study to simplistically state that all LNG terminals are "in the public interest".

The DOE/FE's rush to approve terminals from 2005-2015, calling them in the "public interest" when viewed now in light of current oversupply, points out the significant dangers in relying on models to

predict the future of rapidly changing markets. Approved LNG terminals, finding themselves not able to secure long term contracts for their full capacity, has put those large capital investments at risk. It continues to raise, Senator Wyden's questions and ours, of whether a handful of subjective studies should be determining "public interest".

With the approval of Lake Charles LNG in December 2015, FERC and DOE now have LNG terminals totaling 12.82 bcf/d capacity.[1] Looking at the 2015 LNG Export studies prediction that as supply grows, the margin between the US Henry Hub price and foreign markets such as Japan shrinks. This is indeed true. But of note this has happened without even a single shipment of U.S. LNG sailing from port. The poor calculations of the past failed to take into account that a slew of countries would all be eyeing high Asian prices.

Two years ago the price differential between Henry Hub ($4.90 mmBtu) and Japan Spot market ($18.30 mmBtu)[2] was $13.40. In January 2016 the Henry Hub price was $2.28 and Japan landed spot market price for January was $7.10, a $4.82 difference. The gap has indeed narrowed, so much so that it is all but impossible for companies who have not signed contracts to do so in this buyer's market.

The report goes on to state:

> In the scenarios where international demand pull is sufficient to support 20 Bcf/d of U.S. LNG exports, the export volume growth occurs primarily after the mid-2020s….while international demand continues to increase, it must first work through a large amount of available LNG supply before turning to U.S.-sourced LNG to balance the global market. *(2015 LNG Export Study, page 12-13)*

This poses an interesting quandary in determining how to respond to the 29 applicants still pending and wanting in to the LNG market. But it also raises more questions which are missing from this study.

1) The 2015 LNG Export Study does not take into account some key factors that are critical to making intelligent long term capital-intensive decisions that affect the long term consequences of LNG and public health and safety.

Trying to accurately put in every condition for any model would be impossible and, while this study comes way closer than the last studies to predict supply and demand, it still isn't able to predict human and country behavior. The following explain some of the constraints, many having shifted significantly since this study was published.

> In sum, the Ref_Ref case captures geopolitical, contractual, and regulatory constraints that currently exist in the global gas market and are not already known to be different into the future. This includes:

[1] FERC Approved Export LNG Terminals PDF- https://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf
[2] Japan Jan average LNG spot price falls to $7.10/mmBtu.Feb 9, 2016. Reuter's Toyko. http://www.reuters.com/article/lng-japan-spot-idUSL3N15O0GX

- Current pricing policies and export/import policies across countries remain as they are today throughout the model time horizon, unless there is already concerted action being undertaken to change the internal market.
- Current assumptions regarding the availability and competitiveness of emerging energy technologies are held fixed.
- Current environmental policies are assumed to remain in place throughout the model time horizon. So, for example, it is assumed that the European Union (EU) will maintain an active CO2 trading market but the United States will, collectively, not. (*2015 LNG Export Study, page 31-32)*

Factors like China's slowing economy[3], rapid expansion of worldwide LNG export terminals[4], Japan's restarting of nuclear plants[5], falling oil prices, Iran sanctions being lifted, renewable energy costs dropping, energy efficiency policies enacted, the COP21 agreement and high social costs of climate change caused by GHG pollution, extension of wind and solar tax credits—most are changes that took place after the October 2015 release of this study and all must now get weighed to better determine both LNG supply and demand and whether there is an overall "Public Benefit" or positive increase in GDP when these are input into the modeling. The following real changes must be considered when making a determination to increase U.S. LNG Exports.

Oversupply of LNG: As indicated above, the study agrees that LNG supply has outpaced demand. As this article reports, this can have some very unpleasant consequences for businesses. Risk of an unpredictable market demand is currently having serious consequences for companies without deep pockets to ride out the low oil and gas glut.

> Citi Research says that there will be 25 mtpa of oversupply by 2018. That supply overhang will balloon over the next decade if all proposed LNG export terminals actually get constructed. Citi Research says capacity could exceed demand by one-third by 2025. In an Oct. 5 article, The Wall Street Journal cites the Arrow Energy project in Australia, a joint venture between Royal Dutch Shell and PetroChina. The companies had to take a AUS$700 million impairment charge on the project due to a souring "economic environment," and the project lost AUS$1.5 billion in 2014. The companies are scrapping the terminal.[6]

Slowing China Economy and Japan's restarting of nuclear power:
Much capital has already been invested in LNG and a lot more is poised--banking all on continued growth in demand. China's recent economic slowdown and their starting to price GHG emissions country-wide in a cap and trade program in 2017 will continue to influence and somewhat dampen their

[3] China's Slowing Demand Burns Gas Giants, Oct. 5, 2015, Wall Street Journal http://www.wsj.com/articles/chinas-slowing-demand-burns-gas-giants-1444071604
[4] World LNG Report - 2015 Edition http://www.igu.org/sites/default/files/node-page-field_file/IGU-World%20LNG%20Report-2015%20Edition.pdf
[5] Japan Nuclear Update - Takahama 3 is Third Japanese Reactor to Restart - Feb. 4, 2016 http://www.nei.org/News-Media/News/Japan-Nuclear-Update
[6] Stafford, J. (2015, October 7). LNG Bust Could Last For Years. Retrieved from oilprice.com: http://oilprice.com/Energy/Gas-Prices/LNG-Bust-Could-Last-For-Years.html

need for LNG. Also, with the lifting of the Iran sanctions China has recently committed to a $600 billion dollar trade deal over the next 10 years[7] with Iran who sits on the largest gas reserves in the world. Last month, Japan started up their 3rd nuclear reactor and a 4th is slated to start this month. These combined with the sharp decrease in cost of wind and solar are making it questionable to whether LNG will become the go to "bridge".

Climate Change, COP 21 agreement in Paris and world recognition of the need to LOWER GHG emissions and stay under 1.5 Celsius: At the end of the talks in Paris in December 2015, 195 countries signed an agreement to try and hold global warming to 1.5 degrees Celsius. With states, provinces and select countries like California, Germany and China leading the way, we now have around ¼ of the world's economy putting a price on greenhouse gas emissions.[8] This combined with the sharp decrease in cost of wind and solar, the extension of the wind and solar tax credits and the recent Supreme Court decision approving "demand response" are making it increasingly questionable whether natural gas and LNG will be by-passed as a "bridge fuel" and we go straight to a renewable energy future. Using energy efficient technology like "demand response" to eliminate peak energy, neutralizes much of the increase in electrical demand and when coupled with falling wind and solar costs and tax credit extension, renewables can begin taking the place of retiring coal and gas plants right away, bringing down emissions and transitioning the US to a clean energy economy.[9] [10] [11]

2) **The study failed to include social costs of carbon and methane and full life cycle analysis to determine impacts to climate and public health and safety. These call into question the slight positive benefit that increasing from 12 Bcf/d LNG exports to 20 bcf/d of LNG exports would produce on U.S. GDP and associated macroeconomic impacts of exporting LNG.**

Social Costs of Greenhouse Gas (GHG) Pollution:
We were unable to find a calculation for the total carbon emissions. The real cost impacts of LNG and Natural gas full life cycle emissions should be calculated. Using data from the 2014 EIA LNG Export study, the Reference baseline CO2 emissions is 143,353 million metric tons. If we apply the EPA's Chart on Social Costs of CO2 emissions (Table 1), the average social costs from 2015 to 2040 would be a low of $2.2 billion to a high of $21.8 billion per year (in 2007 dollars). An increase of .6% would be an additional $1.3 million to $13.1 million dollars more. **The Social Cost of CO2 emissions should be included in the 2015 LNG Export study using a range of costs from the chart below.**

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[7] China, Iran Agree to Expand Trade to $600 Billion in a Decade - January 23, 2016. http://www.bloomberg.com/news/articles/2016-01-23/china-iran-agree-to-expand-trade-to-600-billion-in-a-decade

[8] A 2016 Carbon Market Forecast. Kasey Krifka, The Climate Trust. https://www.climatetrust.org/a-2016-carbon-market-forecast/

[9] LNG and Renewable Power: Risk and Opportunities in a Changing World, January 15, 2016, The Brattle Group. http://www.brattle.com/system/publications/pdfs/000/005/249/original/LNG_and_Renewable_Power_-_Risk_and_Opportunity_in_a_Changing_World.pdf?1452804455

[10] How Congress And The Supreme Court Blew Up The Natural Gas 'Bridge' To Renewables. BY JOE ROMM JAN 29, 2016. http://thinkprogress.org/climate/2016/01/29/3743517/congress-natural-gas-renewables/

[11] What Just Happened in Solar Is a Bigger Deal Than Oil Exports. Tom Randall, December 17, 2015. http://www.bloomberg.com/news/articles/2015-12-17/what-just-happened-to-solar-and-wind-is-a-really-big-deal

TABLE 1 - Social Cost of CO2, 2015-2050 a (in 2007 Dollars per metric ton CO2)
Source: Technical Support Document (PDF, 21 pp, 1 MB): Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (May 2013, Revised July 2015)[12]

	Discount Rate and Statistic			
Year	**5% Average**	**3% Average**	**2.5% Average**	**3% 95th percentile**
2015	$11	$36	$56	$105
2020	$12	$42	$62	$123
2025	$14	$46	$68	$138
2030	$16	$50	$73	$152
2035	$18	$55	$78	$168
2040	$21	$60	$84	$183
2045	$23	$64	$89	$197
2050	$26	$69	$95	$212

a The SC-CO2 values are dollar-year and emissions-year specific.

The study also needs to include Life Cycle Analysis of methane fugitive emissions when determining the true GHG (CH4) emissions and attribute the full social cost of methane in the report. It is unclear from the report whether any fugitive methane emission, which can range widely but are reported in Science as 5.4% of total life cycle production,[13] are included in the analysis. Since Methane traps heat 36 times more effectively than CO2 over 100 years and 86 times more over 20 year span, fugitive emissions, would add significantly to the social cost—increasing the above emissions and costs by another 4.6 times over 20 years and 1.9 times the GHG pollution and associated social costs over 100 years.

More recently, in EPA's *Regulatory Impact Analysis for Oil and Natural Gas Proposed NSPS*, published in August 2015, a chart for the social cost of Methane (See Table 4.3)[14] was included. Using those values, it is clear that fugitive methane emissions in the full life cycle production of natural gas comes with a high social cost.

[12] EPA Social Cost of Greenhouse Emissions, July 2015 -
[13] Methane Leakage from North American Natural Gas Systems: http://www.sciencemag.org/content/343/6172/733.summary
[14] Regulatory Impact Analysis for Oil and Natural Gas Proposed NSPS, page 4-14. http://www3.epa.gov/airquality/oilandgas/pdfs/og_prop_ria_081815.pdf

Table 4-3 Social Cost of Methane ($SC\text{-}CH_4$), 2012 – 2050[a] [in 2012$ per metric ton] (Source: Marten *et al.*, 2014[b])

Year	$SC\text{-}CH_4$			
	5 Percent Average	3 Percent Average	2.5 Percent Average	3 Percent 95th percentile
2012	$430	$1,000	$1,400	$2,800
2015	$490	$1,100	$1,500	$3,000
2020	$580	$1,300	$1,700	$3,500
2025	$700	$1,500	$1,900	$4,000
2030	$820	$1,700	$2,200	$4,500
2035	$970	$1,900	$2,500	$5,300
2040	$1,100	$2,200	$2,800	$5,900
2045	$1,300	$2,500	$3,000	$6,600
2050	$1,400	$2,700	$3,300	$7,200

[a] The values are emissions-year specific and are defined in real terms, i.e., adjusted for inflation using the GDP implicit price deflator.
[b] The estimates in this table have been adjusted to reflect the minor technical corrections to the $SC\text{-}CO_2$ estimates described above. See Corrigendum to Marten *et al.* (2014) for more details http://www.tandfonline.com/doi/abs/10.1080/14693062.2015.1070550.

Social Costs associated with CO2 and CH4 (methane) carry significant implications in determining the viability of LNG in today's world and should be included in this and future studies.

Some examples of these externalities that are NOT mentioned in this study but are the result of human caused fossil fuel pollution are the increasing number of extreme weather events[15] [16] that include drought, floods, fires and wind events. Storms like Sandy which cost the government $60 billion in emergency funds, the tropical storm that hit Northern California and Southern Oregon on Feb 6th, 2015 that dumped 3 inches of rain in 24 hours, toppled thousands of trees across a 100 mile swath and created landslides that closed Highway 66 where we live in Oregon are costly and life threatening. Fires have been raging in the wake of our hotter, longer summers in the West and drought threatens drinking water, agriculture and fisheries.

In the reality of climate change the natural gas/LNG industry with its 10%+ loss incurred in the energy intensive process to liquefy the natural gas, it is an unconscionable oversight with catastrophic results, to NOT be putting the real social costs on our continuing to use of fossil fuels. We are over 400ppm of CO2 equivalent already causing a 1 degree Celsius global temperature increase and science says we have to return to 350 ppm. We fail to see how we can reach these goals if the path Department of Energy has been advocating for over the past 10 years is increased use of natural gas.

[15] The Unsustainable Trend of Natural Hazard Losses in the United States, November 14, 2011. http://www.mdpi.com/2071-1050/3/11/2157
[16] U.S. Billion-dollar Weather and Climate Disasters: Data Sources, Trends, Accuracy and Biases. Smith, Adam B. Katz., Richard. Natural Hazards. June 2013, Volume 67, Issue 2, pp 387-410, http://link.springer.com/article/10.1007%2Fs11069-013-0566-5

3) **The study fails to address the vast difference in costs between greenfield and brownfield LNG projects and the risk to capital given the many uncertainties that face pushing LNG as the next energy currency**.

One concern that faces the LNG future is the risk taken when investing large sums of capital into an industry that may soon get passed up with a move toward renewable energy.

> U.S. natural gas will be an attractive source of supply to foreign consumers as long the cost to deliver is competitive with other sources of supply. Moreover, the commensurate investments in production, liquefaction, and shipping must remain attractive to investors. *(2015 LNG Export Study, page 20)*

The authors of the Brattle Group's "LNG and Renewable Power: Risk and Opportunity in a Changing World", analyzed the current and projected cost of gas-fired generation using LNG from North America versus the current projected cost of renewable power in markets outside of North America and deduced that in some places wind and solar are already competitive with LNG for electric generation.

> The increasing competition between renewable power and gas-fired generation using LNG should be considered carefully by participants in the global LNG markets. This competition increases the uncertainty in global gas demand and the future LNG requirements in markets now being targeted by North American LNG export developers," the report notes. "Both investors in LNG infrastructure and buyers of LNG under long-term contracts will want to consider these risks before making large and long-term commitments to buy or sell LNG.[17]

The variation of costs between US LNG projects must also be considered. It's not clear in the study what cost parameters, if any, were used for different geographical parts of the country. In the 2015 World LNG Report there was a considerable range between capital cost of greenfield and brownfield with greenfield costs increasing at a much faster rate.

> Cost has been the main challenge facing LNG projects worldwide. Liquefaction projects have faced considerable cost escalation since 2000 – several projects reported cost overruns in the range of 30-50% after construction began. Unit costs for liquefaction plants (in real 2014 dollars) increased from an average $321/tonne from 2000-2006 to $851/tonne from 2007-2014. Greenfield projects have increased from $326/tonne to $1,185/tonne, while brownfield projects have only increased to $516/tonne, up from $315/tonne.[18]

[17] LNG and Renewable Power: Risk and Opportunities in a Changing World, January 15, 2016, The Brattle Group. http://www.brattle.com/system/publications/pdfs/000/005/249/original/LNG_and_Renewable_Power_-_Risk_and_Opportunity_in_a_Changing_World.pdf?1452804455

[18] World LNG Report 2015, page 26. http://www.igu.org/sites/default/files/node-page-field_file/IGU-World%20LNG%20Report-2015%20Edition.pdf

The recent U.S. Congress decision to extend wind and tax credits and the Supreme Court decision to allow "demand response" will continue to push renewable energy costs lower and have shortened the time in which renewable energy will surpass conventional fossil fuel energy.

> The numbers are really stunning. According to a recent report by the investment firm Lazard, the cost of electricity generation using wind power fell 61 percent from 2009 to 2015, while the cost of solar power fell 82 percent. These numbers — which are in line with other estimates — show progress at rates we normally only expect to see for information technology. And they put the cost of renewable energy into a range where it's competitive with fossil fuels.[19]

Another contributing factor that will help renewables grow, and more quickly supplant natural gas as a "bridge fuel" to a clean energy economy, is the recent Supreme Court decision.

> In a long-awaited decision sure to benefit our wallets and the planet, the U.S. Supreme Court today upheld the Federal Energy Regulatory Commission's (FERC) authority to design rules and incentives for electricity customers to get paid for reducing consumption during periods of high electricity demand. Known as "demand response," it's most often used when energy is expensive and the grid's limits are tested.[20]

The reason this is significant is that through the use of smart technology we will be able to flatten peak electrical energy costs and, rather than replace retiring coal or gas-fired plants with new gas-fired plants as a "bridge", it is predicted that renewable power will compete directly with natural gas. The Brattle Group study shows solar, wind and hydro already is the least expensive option in some parts of the world. With increased production these costs will continue to decline, making renewables the least expensive energy option. Already in early 2016 roughly one quarter of the world's emissions now fall under some form of carbon pricing system.[21] With China introducing Cap and Trade country-wide in 2017, this number will only increase.[22] All of this shift in the world markets, combined with the current oversupply in LNG and current LNG export terminals in the US struggling to get long term contracts for 100% of their capacity, suggest that a shift is already starting to occur. This raises serious questions around what happens if LNG markets dwindle instead of grow due to the growth of wind and solar sectors competing with LNG?

Some, like The Solutions Project, have come up with plans to get to 100% renewable by 2050. They project that the plan for the United States would save a whopping $587 billion (1.5% GPD) in avoided mortality and illness costs. The plan pays for itself in as little as 1.5 years from air pollution and climate cost savings alone. If this were even remotely possible, it seems that the studies we should be

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[19] Wind, Sun and Fire, Paul Krugman, FEB. 1, 2016. New York Times. http://www.nytimes.com/2016/02/01/opinion/wind-sun-and-fire.html?emc=eta1

[20] U.S. Supreme Court Decision: Demand Response Forces Awaken, Allison Clements's Blog, January 25, 2016. http://switchboard.nrdc.org/blogs/aclements/us_supreme_court_decision_dema.html

[21] A 2016 Carbon Market Forecast. Kasey Krifka, The Climate Trust. https://www.climatetrust.org/a-2016-carbon-market-forecast/

[22] China to launch national cap-and-trade plan in 2017, US announces, Suzanne Goldenberg, Sept 24, 2015. The Guardian. http://www.theguardian.com/world/2015/sep/24/china-national-cap-and-trade-deal

conducting are ones that look at how we can attract capital to renewable energy and leave hydrofracturing and fossil fuels, with their high social cost, in the ground.

4) **What criteria should DOE/FE/FERC use in determining approval of additional export terminals when comparing the 29 pending applications?**

One of the reasons for conducting this study and asking for comments was to determine who of the 29 pending applicants should get a shot at a very narrow LNG export market. Our emphatic response, for all the reasons stated above, is NO ONE ELSE! The risk and uncertainty created by significant and ongoing changes in energy markets, our cascading toward increasing climate chaos and the failure to incorporate real costs of GHG pollution caused by continued use of fossil fuel energy, clearly show that the narrow positive GDP margin currently shown in the 2015 LNG Export study would be negated and that LNG Exports are most certainly NOT in the "public interest."

Should the DOE decide against prevailing wisdom to curtail our finite and harmful fossil fuels resources and move to approve an additional 8 bcf/d of LNG capacity, taking us from the current 12 bcf/d still not fully contracted terminals to 20 bcf/d, it should be first and foremost based on demand carefully weighed against harm. And only then, if there are willing buyers contracted for 100% of the capacity.

By doing this, you establish two things: that there is actual demand for U.S. LNG and that it must be delivered through long term contracts at prices a company can build infrastructure and sell LNG for thus guaranteeing that the jobs and the economic benefit that this study suggests, would actually exist. Without contracts, as in the case of Jordan Cove/Pacific Connector where we live in Oregon, there is absolutely zero public benefit in granting approval.[23] These LNG terminals and their associated pipelines are far too damaging, dangerous, polluting and a financial risk putting valued natural resources, private property, health and safety and risk of abandoned and stranded assets in jeopardy. Instead money could be put into other more beneficial renewable energy sources for a real and direct "public benefit" right here at home.

Terrain and earthquake, tsunami and rain induced risk to public safety and environmental destruction should also be taken into consideration if future LNG terminals are approved.

If, as is suggested, the world demand exists for LNG, then only those applicants that secure 100% longer term contracts and can show financial strength and a good track record of following all state and federal permit/certificate orders should be considered. Another factor that should be taken into consideration both in determining whether a project or applicant meets the increased U.S. GDP benefits is whether the stakeholder company(s) is/are from the United States. If profits over the course of the project do not bring dollars into the United States economy, but rather are taken elsewhere, this limits the trade balance perceived to partially make these projects in the "public interest". When GDP dollars were determined in the study, was any profit to companies projected to account for any portion of the overall GDP or trade balance?

[23] Landowner letter filed with FERC, Dec 9, 2015.
http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20151210-5000

On this note, we believe that DOE/FE has far out step its bounds in determining that "LNG exports" are in the "public interest" and that private companies should be granted eminent domain for private corporate gain when LNG exports as in the case of Jordan Cove and the gas being exported are most certainly NOT for "public use" as eminent domain is designed to serve. This shift from "public use" to "public interest"--all based on modeling that has so far not predicted the correct climate change ravaged world and flies in the face of our 5th amendment constitutional rights--is both unconstitutional and absolutely wrong.

If the true social costs and the full life cycle analysis were included in the 2015 LNG Export study, additional costs would have produced a negative U.S. GDP result. The flood gates should NOT have been, nor should they continue to be, opened allowing more cost-intensive and harmful climate chaos causing pollution. It is time we recognize that for the sake of future generations we cannot keep fowling our atmospheric nest. Only when we remove the existing fossil fuel subsidies and we charge the real social costs of fossil fuel pollution both burned and fugitive will we find that renewable energy is the obvious choice. The sooner we get to that realization and start building the new energy economy the better. Our recommendation is that DOE/FERC stop approving more LNG terminals starting now.

Thank you for this opportunity to comment on the study.

Sincerely,

Deb Evans and Ron Schaaf,
(as individuals)
and
Hair on Fire Oregon