February 12, 2016

To: U.S. Department of Energy (FE–34),
Office of Regulation and International Engagement
Office of Fossil Energy

RE: Comments on the 2014 EIA LNG Export Study and 2015 LNG Export Study, submitted via the form at http://www.energy.gov/fe/2015-lngstudy

As described in the Federal Register Vol. 80, No. 249, we are submitting comments on the 2014 EIS LNG Export Study and the 2015 LNG Export Study. Please consider these comments from Cascadia Wildlands concerning the Jordan Cove Energy Project (FERC Docket # 13-483 and 13-492. FE Docket # 12-32-LNG).

Corporations that seek authority to export natural gas to countries with which the U.S. has not entered into a free trade agreement (FTA) must be found by the Department of Energy, Office of Fossil Energy (DOE/FE) to be in the public interest. These two studies lack adequate information to fully inform that "public interest" determination.

2014 and 2015 LNG Export Studies

The 2015 study clearly states that exporting LNG is not in the public interest. "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"[1]

In spite of this, the study finds that: "the positive impacts of higher U.S. gas production, greater investment in the U.S. natural gas sector, and increased profitability of U.S. gas producers typically exceeds the negative impacts of higher domestic natural gas prices associated with increased LNG exports."[2]

In other words, while U.S. consumers would have eroded benefits, gas producers would make more money. This clearly elevates corporate interest over public interest.

The 2015 study finds that: "the recent era of low natural gas prices has been widely touted as a boon to domestic manufacturers".[3] This boon to domestic manufacturers has,

[1] The Macroeconomic Impact of Increasing U.S. LONG Exports. October 29, 2015. Leonardo Technologies, Inc. for the U.S. Dept of Energy. (2014 LNG Study). Page 9.
[2] Id. Page 16.
[3] 2015 LNG Study. Page 19.

in turn, provided a boon to domestic employment. Yet the DOE again considers gas producers who are "eager to take advantage of higher prices on the global market[4]" to be more important when considering public interest.

This same assessment on manufacturing impacts was made in the DOE 2012 EIA study using NERA Economic Consulting. In response to that assessment, Senator Ron Wyden determined the loss of manufacturing jobs is significant. He wrote: "The study tries to downplay the economic importance of these manufacturing industries by saying they represent ½% of total U.S. employment; however, that equaled 1.2[5]". The DOE should have also considered the loss of U.S. manufacturing jobs to be significant.

The 2015 study assumes there will be a long-term demand for 20 Bcf/d. This assumption of the demand should be reconsidered in light of the current depressed natural gas market. The DOE should never find a project to be in the "public interest" if there is no demand for its product. For instance, the Jordon Cove LNG Export proposal has no commitments or signed contracts[6]. Determining public interest for a project with no contracts would mean U.S. citizens could loose their land against their will for a product that no one wants or needs.

Additionally the 2015 study failed to different between U.S. companies exporting natural gas, from foreign corporations exporting natural gas from the United States. The 2015 study concluded that "higher *U.S.* gas production, greater investment in the *U.S.* natural gas sector, and increased profitability of *U.S.* gas producers" meets a "public interest" test. This should mean that foreign corporations do not meet the "public interest" test, such as the foreign-owned Jordan Cove Energy Project. Most of Jordan Cove's profits would go to Canada and not benefit the United States. Veresen, owner of Jordan Cove, has stated that 70% of the gas being exported from Oregon would come from Canada, not the United States[7]. The DOE's 2015 LNG study focuses only on U.S. gas production and benefits, and never considers how a public interest determination will benefit foreign gas production and foreign profits.

The 2015 LNG study's Concluding Remarks state that "LNG exports are marginally positive."[8] However, that margin is so small, it is within the margin of error. Because the margin is so small, the DOE should err on side of caution, not on the side of corporate interest.

Finally, neither the 2014 or 2015 LNG study considers the economic impact of global warming, and how natural gas, especially fugitive methane, contributes to green house gases and climate change. A "public interest" determination must consider the present public, as well as our children, and the potential economic collapse of world markets from global warming if continued gas extraction were allowed to the degree considered in the study.

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[4] 2015 LNG Study, page 19.
[5] www.wyden.senate.gov/news/press-releases/wyden-highlights-flaws-in-doe-export-study-
[6] Pacific Connector letter to FERC, 11-4-15 in response to FERC 10-14-15 data request.
[7] Jordan Cove Energy Project Resource Report 1. 2013. Appendix C.1, Page 6.
[8] 2015 LNG Study, page 82.

LNG and Renewable Power, 1-15-16 Study

The 2015 and 2014 LNG studies under review by DOE do not take into consideration newer information detailed in a January 15, 2016 study titled "LNG and Renewable Power. Risk and Opportunity in a Changing World", prepared by Jurgen Weiss, Phd, Steven Levine, Yingxia Yang, PhD, and Anul Thapa.[9]

The 2016 LNG and Renewal Power study points out that studies like the DOE 2014/15 LNG studies do not consider fossil fuel competition with the growth of renewable energy sources in the coming years. 2016 LNG study states: "… there are important and intensifying linkages between global natural gas and electricity markets that will impact developments in renewables markets and have feedback effects into the natural gas market."[10]

Additionally, the 2014 and 2015 DOE studies failed to fully consider the recent drop in fossil fuel prices and other factors, such as Japan's re-start of some of their nuclear power plants. Asian LNG prices, which had risen to $15/MMBtu recently have now collapsed to as low as $6/MMBtu.[11] The 2014 and 2015 LNG DOE studies did not consider this deterioration in LNG prices for export projects under development in North America. LNG suppliers need LNG delivered prices in Asia to be around $11/MMBtu to be profitable. In addition to projects in development, other projects are coming online in 2015-2020, causing global LNG markets to be oversupplied for years to come.

The 2014 and 2015 DOE LNG studies failed to fully consider how, in this market, LNG supplies associated with new projects coming online over the next few years will be absorbed, and, when in the future there might be a rebound in global LNG prices so even more LNG export terminals can be constructed. While companies producing natural gas, and FERC, hope the LNG over supply is temporary, it is likely not, especially considering the renewable fuels coming online.

The 2014 and 2015 DOE LNG studies do not fully recognize the LNG supply glut, and when they do, they assume that demand from Asia will fix it by doubling in the next 20 years. However, this forecast is highly uncertain, given the shift towards more use of renewable power throughout Asia that will limit the growth of natural gas.

The 2016 LNG and Renewable Study states:

> Ultimately, investments in North American LNG terminals require that the prices paid for LNG in overseas markets are greater than or equal to the price of U.S. natural gas supplies (e.g., at Henry Hub) plus the cost of all infrastructure necessary to liquefy and deliver LNG to overseas markets (including a fair rate of return on that infrastructure). If the cost of renewable generation is low enough overseas (i.e., below the cost of new gas-fired generation burning LNG from North America), it could

[9] This study has been uploaded with our comments.
[10] LNG and Renewable Study. 1-15-2016. Page ii.
[11] LNG and Renewable Study. 1-15-2016. Page ii.

> dampen the attractiveness of North American-sourced LNG as a fuel for electric generation and the willingness of market participants to continue to contract for LNG export infrastructure.[12]

The DOE 2014 and 2015 LNG studies failed to account for this.

The 2016 LNG and Renewable Study concludes that "the traditional comparison of delivered LNG prices to prevailing oil prices may miss an important dynamic, namely the fast progress of renewable energy technologies capable of providing an alternative to one or more of the major sources of demand for LNG…"[13]. This is exactly what the DOE 2014 and 2015 LNG studies did, compared delivered LNG prices to prevailing gas prices while ignoring the advances of renewable energy sources in potential LNG markets. The DOE/FE must reconsider the 2014 and 2015 studies to include the renewable market.

Any LNG infrastructure approved by the DOE will be operating 40 years into the future, where climate change will be a bigger consideration, and where "leave it in the ground" philosophies, and renewable sources of energy, will prevail.

The DOE/FE studies must also be corrected so they find public interest to be greater than corporate interest, and move any conclusions out of a margin of error that is wide enough to allow DOE to err on the side of caution.

Thank you for considering these comments when determining the "public interest" for exporting LNG to NFT countries.

Sincerely

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[12] LNG and Renewable Study. 1-15-2016. Page V.
[13] LNG and Renewable Study. 1-15-2016. Page 34.