OREGON WILD

10 Feb 2016

TO: U.S. Department of Energy (FE-34)
Office of Regulation and International Engagement
Office of Fossil Energy

Submitted via: LNGStudy@hq.doe.gov and
https://fossil.energy.gov/App/DocketIndex/Docket/Comment?docketId=11

Subject: Macroeconomic Impacts of LNG Exports Studies — comments

Dear DOE:

Please accept the following comments from Oregon Wild concerning the Macroeconomic Impacts of LNG Exports Studies, https://www.federalregister.gov/articles/2015/12/29/2015-32590/macroeconomic-impacts-of-lng-exports-studies#h-6. These comments supplement the comments we submitted on January 22, 2013. Oregon Wild represents over 15,000 members and supporters who share our mission to protect and restore Oregon's wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded.

Does the current macroeconomic study account for the fact that the price differential between Asia and North American has largely disappeared? The benefits of export likely evaporate as long as Asian gas prices remain low, and they show no signs of returning to the high levels that previously triggered interest in LNG export.

Does the current macroeconomic study account for the long-term economic slow-down in Asia? China's economy shows signs of weakness and this will likely have repercussions throughout Asia, where demand for energy (and the benefits of LNG export) will remain low. WSJ 2016 "Gloom Hangs Over China's Economy Amid Market Turmoil" http://www.wsj.com/articles/gloom-hangs-over-chinas-economy-amid-market-turmoil-1452182117; The Washington Post 2016. "China's slowdown, financial mayhem cast long shadow across world" https://www.washingtonpost.com/news/wonk/wp/2016/01/11/chinas-slowdown-financial-mayhem-cast-long-shadow-across-world/. Global energy and commodity prices are experiencing deflation. Is this considered in the analysis? In the current global economic environment, the benefits of LNG export are not apparent.

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DOE's latest macroeconomic study appears to conclude that exporting LNG is in the public interest because it will result in a "marginally positive" macroeconomic effect on GDP. This is an improper framing of the question whether LNG export is in the public interest. A public interest determination requires a full accounting and weighing of ALL the costs and benefits, both economic AND non-economic, as well as costs and benefits factored into prices and traded in markets AND those not factored into prices and not trade in markets.

DOE needs to recognize that GDP is not a reasonable or complete proxy for the public interest. GDP captures some costs and benefits but not all of them. There are real and substantial costs associated with LNG export that are not reflected in dollars and GDP. There are a wide variety of "externalities" associated with LNG export, including but not limited to:

- the social and economic costs of climate change and ocean acidification caused by combustion of fossil fuels and emission of greenhouse gases (more on that below);
- the adverse social and environmental costs of pipeline construction to support LNG export (such as the 230-mile Pacific Gas Connector pipeline through SW Oregon), which include the social impact of exercising eminent domain on unwilling landowners, permanent loss of destruction of old growth forests, degradation of salmon habitat, increased risk of landslides and forest fires in rugged mountainous terrain;
- the adverse social and environmental costs of LNG export terminal construction, (such as the Jordon Cove and Oregon LNG export projects proposed in Oregon) including new port slips, dredge and filling of estuaries, construction of 400+ Mw fossil fueled powerplant, liquefaction trains, storage facilities, loss of estuary habitat, increased risk of shipping accidents and airport accidents, huge safety exclusion zones around LNG tanker ships that adversely affect recreation, navigation, and aviation.

More information on these externalities is provided in the attached May 22, 2015 letter from Oregon Wild to FERC regarding FERC's public interest determination related to the Pacific Gas Connector Pipeline proposed through SW Oregon in order to deliver gas for export.

DOE's LNG Export Study admits that LNG exports are associated with an increase in gas production. This means LNG exports will increase emissions of greenhouse gases, not just through combustion of gas and production of CO2, but also methane leaks throughout the LNG supply chain. Methane has a climate impact far worse than CO2. DOE cannot argue that this increase in gas production won't make a difference in the global scheme of the climate problem, but as Voltaire said, "No snowflake in an avalanche ever feels responsible." DOE's analysis must recognize that global warming will not be solved by one miraculous technological fix or by changing one behavior or one economic activity. The whole global carbon cycle must be managed to reduce carbon emissions and increase carbon uptake. Recent evidence supports the conclusions that all net emissions of greenhouse gases are adverse to the climate. None can be considered *de minimus*. "We show first that a single pulse of carbon released into the atmosphere increases globally averaged surface temperature by an amount that remains approximately

constant for several centuries, even in the absence of additional emissions. We then show that to hold climate constant at a given global temperature requires near- zero future carbon emissions. Our results suggest that future anthropogenic emissions would need to be eliminated in order to stabilize global-mean temperatures. As a consequence, any future anthropogenic emissions will commit the climate system to warming that is essentially irreversible on centennial timescales." H. Damon Matthews and Ken Caldeira. 2009. Stabilizing climate requires near-zero emissions. Nature Vol 455 | 18 September 2008 | doi:10.1038/nature07296.

Former D.C. Circuit Judge Wald wrote in a 1990 dissenting opinion, which was recently quoted with unanimous approval by the Ninth Circuit in Center *for Biological Diversity v. NHTSA*:

> [W]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?

538 F.3d at 1217. Similarly, the U.S. Supreme Court's decision in *Massachusetts v. EPA* noted that one cannot avoid responsibility to reduce and mitigate the climate problem by attempting to minimize the scale of one's contribution to the problem. ("While it may be true that regulating motor-vehicle emissions will not by itself reverse global warming, it by no means follows that we lack jurisdiction to decide whether EPA has a duty to take steps to slow or reduce it.... In sum, … [t]he risk of catastrophic harm, though remote, is nevertheless real. That risk would be reduced to some extent if petitioners received the relief they seek." 127 S.Ct. 1438, 1455 (2007) http://web.archive.org/web/20080610172128/http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf)

The long-term climate impacts of LNG export are particularly important part of the public interest determination. Most importantly, the market is not a good indicator of the public interest. Evidence of market demand for LNG is evidence of demand for energy, but energy sources are largely interchangeable. There are many ways to meet demand for energy using renewable energy that will not harm the climate, and that will have a much greater net positive effect on GDP and the public interest.

Evidence of demand for LNG is NOT evidence that export of LNG is in public interest. In fact, evidence of market demand for LNG is an indication of public harm, not good. Climate change caused by fossil fuel use represents a massive failure of the market. An efficient market requires accurate prices, yet the price of all the fossil energy sold over the last century has not included the very substantial cost of the climate catastrophe that it is causing and will continue to cause for the next 20,000 years. Studies show that the effects of climate change are very long lasting. See Clark, Shakun, Marcott et al 2016. Consequences of twenty-first-century policy for multi-millennial climate and sea-level change. Nature Climate Change (2016)

doi:10.1038/nclimate2923.
http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2923.html

In the absence of LNG prices that accurately internalize all of the external costs of LNG use, DOE needs to develop some way to estimate the magnitude of externalities and weigh and compare those to the alleged increase in GDP. One among many external costs is the social costs of climate change. GHG emissions from the extraction, transport and use of fossil fuels impose significant costs on society, such as the cost of damage caused by climate change, ocean acidification, the costs of adapting to climate change, and the cost of sequestering carbon to mitigate emissions. The Social Cost of Carbon Dioxide could be referred to as the "climate misery index" related to the human impacts of greenhouse gas emissions. CEQ's draft guidance on NEPA and Climate Change recognizes that the Social Cost of Carbon Dioxide (SCC) is a "harmonized, interagency metric that can provide decision-makers and the public with some context for meaningful NEPA review." 79 Fed. Reg. 77802, 77827. "The SCC estimates the benefit to be achieved, expressed in monetary value, by avoiding the damage caused by each additional metric ton (tonne) of carbon dioxide (CO2) put into the atmosphere. Ruth Greenspan and Dianne Callan, World Resources Institute, More than Meets the Eye: The Social Cost of Carbon in U.S Climate Policy, in Plain English (July 2011) at 1, http://pdf.wri.org/more_than_meets_the_eye_social_cost_of_carbon.pdf. DOE's public interest analysis should carefully disclose these social costs. The express purpose of SCC analysis is to provide an apples-to-apples basis for comparing a project's economic benefits with GHG pollution impacts (costs). Where SCC is not analyzed and disclosed, these impacts (costs) are hidden from the public and, in fact, often "paid for" by the broader environment and public in the form of degraded ecological resiliency, public health impacts, and more.

DOE must recognize that the federal estimate of SCC likely underestimates—perhaps significantly—the climate impacts of GHG pollution. See the attached Supplemental Materials.

Quality of life, social justice, economic disparity, and moral hazards are important issues that are difficult to factor into the public interest equation, but DOE must at least consider them.

Continued use of fossil fuels threatens the basic human rights of humanity. DOE must address this as part of its public interest analysis.

> It is widely recognized that the earth's climate is undergoing some fundamental changes. I argue that these changes undermine several core human interests - including, interests in (i) decent health, (ii) economic necessities, and (iii) physical security. Building on this, and after taking into account the kinds of duties required to protect these interests, I argue that persons have a right to the protection of these vital interests. These rights, I argue, are held by future people as well as contemporaries. I further explore how one specifies the level of protection that is required by these rights. The paper then proceeds to examine two kinds of challenge to this position - an extreme challenge (which denies that

future people have rights) and a moderate challenge (which claims that a positive social discount rate should be applied to the rights of future generations). Neither kind of challenge is found persuasive.

Simon Caney, "Climate Change and Human Rights" http://depts.washington.edu/ponvins/ecc/abstracts.html.

Nolan (2015) reported new economic analysis showing -

> … if the projected temperature rise by the end of this century comes true, the results will be economically catastrophic—much worse than formerly thought, especially for people in poorer, warmer countries. Global inequality, in other words, could be exacerbated to an unthinkable degree. From UC-Berkeley:
>
> > The findings indicate climate change will widen global inequality, perhaps dramatically, because warming is good for cold countries, which tend to be richer, and more harmful for hot countries, which tend to be poorer. In the researchers' benchmark estimate, climate change will reduce average income in the poorest 40 percent of countries by 75 percent in 2100, while the richest 20 percent may experience slight gains.

Hamilton Nolan. Climate Change Could Destroy the Global Economy in a Most Terrifying Fashion. Oct 21, 2015. http://gawker.com/climate-change-could-destroy-the-global-economy-in-a-mo-1737849317 *quoting* Marshall Burke, Solomon M. Hsiang & Edward Miguel 2015. Global non-linear effect of temperature on economic production. Nature (2015) doi:10.1038/nature15725. 21 October 2015. http://web.stanford.edu/~mburke/climate/BurkeHsiangMiguel2015.pdf

To the extent that LNG use causes net carbon emissions and contributes to global warming, this project will adversely affect human health and safety. The IPCC expects heat waves, floods, storms, fires, and droughts related to global warming to contribute to increased rates of death, disease, and injuries for millions around the world. The agency should review, disclose, and consider the human health effects of climate change described in the relevant reports:

- Confalonieri, U., B. Menne, R. Akhtar, K.L. Ebi, M. Hauengue, R.S. Kovats, B. Revich and A. Woodward, 2007: Human health. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 391-431. IPCC: Working Group II contribution to the IPCC Fourth Assessment Report. Climate Change Impacts, Adaptation, and Vulnerability. Chapter 8 – Human Health http://web.archive.org/web/20080827195234/http://www.gtp89.dial.pipex.com/08.pdf. ("Climate change currently contributes to the global burden of disease and premature deaths (very high confidence). … Projected trends in climate-change-related exposures of importance to human health will: • increase malnutrition and consequent disorders, including those relating to child growth and development (high confidence) [8.2.3, 8.4.1]; • increase the number of people suffering from death, disease and injury from heatwaves,

floods, storms, fires and droughts (high confidence) [8.2.2, 8.4.1]; • continue to change the range of some infectious disease vectors (high confidence) [8.2, 8.4]; • have mixed effects on malaria; in some places the geographical range will contract, elsewhere the geographical range will expand and the transmission season may be changed (very high confidence) [8.4.1.2]; • increase the burden of diarrhoeal diseases (medium confidence) [8.2, 8.4]; • increase cardio-respiratory morbidity and mortality associated with ground-level ozone (high confidence) [8.2.6, 8.4.1.4]; • increase the number of people at risk of dengue (low confidence) [8.2.8, 8.4.1]; • bring some benefits to health, including fewer deaths from cold, although it is expected that these will be outweighed by the negative effects of rising temperatures worldwide, especially in developing countries (high confidence) [8.2.1, 8.4.1].")

- A.J. McMichael, D.H. Campbell-Lendrum, C.F. Corvalán, K.L. Ebi, A. Githeko, J.D. Scheraga and A. Woodward. 2003. Climate change and human health - risks and responses. WHO. http://www.who.int/globalchange/publications/cchhbook/en/ (In its "World Health Report 2002", WHO estimated that in 2000 climate change was responsible for approximately 2.4% of worldwide diarrhea, and 6% of malaria. The World Health Organization says "consideration of global climatic-environmental hazards to human health will become a central role in the sustainability transition debate.").
- Climate change appears to be increasing rainfall intensity during winter storms which is likely to decrease slope stability and increase the risk of landslides. ("From 1948 to 2006, storms measured at extreme precipitation increased 18% in the Pacific coastal states, including a 26% jump in California, according to a 2007 analysis of federal climate data by Environment California, an environmental group based in Los Angeles.") Jim Carlton, "Suspect: Global Warming." Wall Street Journal. Sept 2, 2008. http://www.climateark.org/shared/reader/welcome.aspx?linkid=105773&keybold=global%20warming%20mudslides.
- The 2006 California heat wave caused serious helth issues for those who lack access to air conditioning, e.g., poor people. http://www.eurekalert.org/pub_releases/2009-02/cums-sa2022509.php.
- A major report on managing the health effects of climate change, was produced jointly by 'The Lancet' and UCL in May 2009. The report says among other things, "Climate change is the biggest global health threat of the 21st century. … Even the most conservative estimates are profoundly disturbing and demand action. … Effects of climate change on health will affect most populations in the next decades and put the lives and wellbeing of billions of people at increased risk. … Estimates show that small increases in the risk for climate-sensitive conditions, such as diarrhoea and malnutrition, could result in very large increases in the total disease burden. … Malaria, tick-borne encephalitis, and dengue fever will become increasingly widespread. … As people migrate away from areas deteriorated by gradual warming or destroyed by extreme weather events, they not only place substantial demands on the ecosystems and social infrastructures into which they migrate, but also carry illnesses that emerge from shifts in infectious-disease vectors. … Management of the health effects of climate change will require inputs from all sectors of government and civil society … Luxury emissions are different from survival emissions, which emphasises the need for a strategy of contraction and convergence, … http://www.ucl.ac.uk/news/news-articles/0905/09051501/.

- According to researchers at Stanford, "Half of world's population could face climate-induced food crisis by 2100. Rapidly warming climate is likely to seriously alter crop yields in the tropics and subtropics by the end of this century and, without adaptation, will leave half the world's population facing serious food shortages, new research shows. To compound matters, the population of this equatorial belt – from about 35 degrees north latitude to 35 degrees south latitude – is among the poorest on Earth and is growing faster than anywhere else." http://www.eurekalert.org/pub_releases/2009-01/uow-how010409.php. The full study published in Science is available here: David S. Battisti, Rosamond L. Naylor. 2009. Historical Warnings of Future Food Insecurity with Unprecedented Seasonal Heat. Science Vol 323. January 9, 2009. http://www.sciencemag.org/content/323/5911/240.abstract see also the Stanford Program on Food Security and the Environment at http://fse.stanford.edu/.
- For information on the human health impacts of climate change see CCSP. Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems (SAP 4.6). U.S. Environmental Protection Agency, Washington, D.C., 2008. http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=197244.

The need to address global climate change is a moral and ethical issue. Academics from around the world explained in a letter preceding the Paris Climate Conference in 2015:

> Some issues are of such ethical magnitude that being on the correct side of history becomes a signifier of moral character … Indigenous peoples and the developing world are least responsible for climate change, least able to adapt to it, and most vulnerable to its impacts. … [T]he leaders of the industrialized world shoulder a grave responsibility for the consequences of our current and past carbon emissions. … [A]ny sacrifice involved in making [GHG emissions] reductions is far overshadowed by the catastrophes we are likely to face if we do not: more extinctions of species and loss of ecosystems; increasing vulnerability to storm surges; more heatwaves; more intense precipitation; more climate related deaths and disease; more climate refugees; slower poverty reduction; less food security; and more conflicts … We undersigned concerned academics, researchers, and scientists from around the world recognize the seriousness of our environmental situation and the special responsibility we owe our communities, future generations, and our fellow species. … We call upon our leaders to do what is necessary to prevent catastrophic climate change. With just as much urgency, we call upon our fellow citizens to hold their leaders responsible for vigorously addressing global warming.

http://globalclimatechangeweek.com/open-letter/

We urge DOE to carefully review the attached comment letter that Oregon Wild submitted to FERC in an effort to inform FERC's consideration of the public interest determination for the proposed Pacific Gas Connector Pipeline and Jordon Cove LNG Export Project in Oregon. This letter contains several relevant points that DOE also needs to consider.

Note: If any of these web links in this document are dead, they may be resurrected using the Wayback Machine at Archive.org. http://wayback.archive.org/web/

Sincerely,

Doug Heiken
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Supplemental Materials

Don't Under-estimate the Social Coast of Carbon Dioxide

As the U.S. Environmental Protection Agency has concluded:

> given current modeling and data limitations, [the federal SCC values] do[] not include all important damages. As noted by the IPCC Fourth Assessment Report, it is "very likely that [SCC] underestimates" the damages. The models used to develop SCC estimates, known as integrated assessment models, do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

EPA, The Social Cost of Carbon,
http://www.epa.gov/climatechange/EPAactivities/economics/scc.html.

Niemi (2015) explained that "Moore and Diaz (2015) found that accounting for the impacts of climate on economic growth increases the Interagency Working Group's estimates of the social cost of carbon by a factor of six." Niemi, E. 2015. Accounting for Climate-Related Risks In Federal Forest-Management Decision, 10 May 2015 [draft]. Federal Forest Carbon Coalition Background Paper 2015–2.
http://static1.1.sqspcdn.com/static/f/551504/26259333/1432605642583/SocialCostsOfCarbonOClandsNiemiMay2015.pdf?token=wDqoa5RkP8EoBLlsRWIPPRuahzg%3D *citing* Moore, F.C., and D.B. Diaz. 2015. "Temperature Impacts on Economic Growth Warrant Stringent Mitigation Policy." Nature Climate Change. 12 January.
http://www.eenews.net/assets/2015/01/13/document_cw_01.pdf ("Optimal climate policy in this model stabilizes global temperature change below 2 ◦C by eliminating emissions in the near future and implies a social cost of carbon several times larger than previous estimates. A sensitivity analysis shows that the magnitude of climate change impacts on economic growth, the rate of adaptation, and the dynamic interaction between damages and GDP are three critical uncertainties requiring further research. In particular, optimal mitigation rates are much lower if countries become less sensitive to climate change impacts as they develop, making this a major source of uncertainty and an important subject for future research.")

> Agencies seeking to incorporate climate change considerations in rules and regulations often rely on a cost-benefit analysis, weighing the cost of curbing emissions against the expected damages from every ton of carbon dioxide (CO2) that goes into the atmosphere — a value known as the "social cost of carbon" (SCC). … While no definite SCC has been set so far, an interagency working group has endorsed a "central" estimate of $21 per ton of CO2 in 2010, or roughly 20 cents per gallon of gasoline — far too small a price incentive to prompt substantive mitigation measures.
>
> …
>
> In the United Kingdom, which started estimating prices for carbon emissions several years ago, the government's latest calculation is a range of $41 – $124 per ton of CO2, with a central case of $83. An expanded calculation of carbon prices for the United States should at least explore prices in this range …

Frank Ackerman, Elizabeth A. Stanton. 2010. The Social Cost of Carbon - A Report for the Economics for Equity and the Environment Network. April 1, 2010. http://e3network.org/wp-content/uploads/2015/04/Ackerman_Social_Cost_of_Carbon.pdf .

In recent work, Nordhaus (2010) ran a an updated version of the regional integrated model of climate and the economy (RICE model).

> The model also calculates the path of carbon prices necessary to keep the increase in global mean temperature to 2 °C or less in an efficient manner. The carbon price for 2010 associated with that goal is estimated to be $59 per ton (at 2005 prices) …

William D. Nordhaus 2010. Economic aspects of global warming in a post-Copenhagen environment. PNAS June 29, 2010 vol. 107 no. 26 11721-11726. http://www.pnas.org/content/107/26/11721.full.pdf.

The 2006 "Stern Review" from the UK Treasury concluded that each ton of carbon dioxide emitted will cause $85 worth of damage to the world's economy. http://webarchive.nationalarchives.gov.uk/20080910140413/http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm. According to the Congressional Research Service, capturing and storing most of the carbon from coal as it is combusted costs between $43-89/ton of CO_2, and this price will likely increase after the many safety, environmental, and efficiency problems with CSS are fully accounted for. Parker, Folger & Stine. 2008. Capturing CO2 from Coal-Fired Power Plants: Challenges for a Comprehensive Strategy. CRS Report for Congress. http://www.fas.org/sgp/crs/misc/RL34621.pdf *citing* S. Julio Friedmann, Carbon Capture and Sequestration As a Major Greenhouse Gas Abatement Option (November 2007), p. 11. http://www.esrl.noaa.gov/gmd/co2conference/pdfs/friedmann.pdf That's another good indication of the value of a storing a ton of carbon in forests.

Howard, P. 2014. OMITTED DAMAGES: What's Missing From the Social Cost of Carbon. http://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Car

bon.pdf ("ABSTRACT: The 2013 Interagency Working Group on the Social Cost of Carbon (IWG) updated the U.S. social cost of carbon (SCC) for 2015 from a central value of $24 to $37 using three integrated assessment models (IAMs): DICE-2010, FUND 3.8, and PAGE09. The SCC is the additional economic damage caused by one ton of carbon dioxide. While some have questioned the increase in the SCC as too high, a thorough examination of the latest scientific and economic research shows that $37 should be viewed as a lower bound. This is because the studies available to estimate the SCC omit many climate impacts—effectively valuing them at zero. Where estimates are available for a given type of impact, they tend to include only a portion of potential harms. This paper represents the first attempt to systematically examine and document these omissions for the latest versions of the three IAMs used by the IWG, as well as earlier versions when they are used in calibrating the updated models. … [H]ot spot damages include[e] increases in forced migration, social and political conflict, and violence; weather variability and extreme weather events; and declining growth rates. A better accounting of catastrophic damages is also needed, as well as many other impacts.")

Laurie T. Johnson & Chris Hope, 2012. The social cost of carbon in U.S. regulatory impact analyses: an introduction and critique, J Environ Stud Sci. DOI 10.1007/s13412-012-0087-7. http://www.ourenergypolicy.org/wp-content/uploads/2012/09/fulltext.pdf ("We reestimate the values from the models (1) using a range of discount rates and methodologies considered more appropriate for the very long time horizons associated with climate change and (2) using a methodology that assigns "equity weights" to damages based upon relative income levels between regions—i.e., a dollar's worth of damages occurring in a poor region is given more weight than one occurring in a wealthy region. Under our alternative discount rate specifications, we find an SCC [social cost of carbon] 2.6 to over 12 times larger than the Working Group's central estimate of $21"…)

FROM: Doug Heiken, Oregon Wild | PO Box 11648, Eugene, OR 97440 | 541-344-0675 | dh@oregonwild.org
TO: LNGStudy@hq.doe.gov
ATTN: Office of Natural Gas Regulatory Activities
DATE: 22 January 2013
RE: NERA Macroeconomic Study of LNG Exports - comments

Please accept the following comments from Oregon Wild regarding NERA's Macroeconomic Study of LNG Exports. Oregon Wild represents approximately 10,000 members and supporters who share our mission to protect and restore Oregon's wildlands, wildlife and waters as an enduring legacy.

The Macroeconomic Study of LNG Export was deeply flawed and cannot form the basis for any credible finding that LNG export furthers the general public interest. Significant flaws in the study include:

- The study admits that real wages will be reduced and profits will increase. Those who will benefit from LNG export are likely already well-off, while those who would be harmed are more likely to be struggling. The study does not adequately account for the adverse social costs of increased economic disparity caused by LNG export and the consequent transfer of wealth TO the wealthy shareholders of energy export companies FROM gas customers and the rest of the economy. Our nation's social fabric is damaged when the rich get richer, and the poor get poorer.
- The study does not adequately account for social and environmental "externalities" like irreversible pollution of groundwater by fracking; habitat damage from increased drilling, building LNG terminals, pipelines, and other infrastructure; and the adverse consequences of climate change from greenhouse gases emissions associated with the entire LNG supply chain (leaky wells, pipelines, fossil energy invested in liquefaction, combustion by end-users, slowing the US's transition away from coal; etc).
- The study does not adequately account for regional and local impacts.
- The study does not account for the most recent projections of future domestic natural gas use as presented in the Annual Energy Outlook (2013).
- The study does not account for emerging uses of natural gas such as transportation fuel.
- The study does not account for the adverse effects of gas exports on the United States' competitive position in world markets. A significant increase in natural gas prices could speed the loss of jobs and slow the repatriation of American jobs that many say is needed to rebuild the middle class.

Please conduct a much more careful review of all the evidence of adverse economic, social, and environmental impacts before approving LNG export.

Sincerely,

/s/

_____

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