



February 13th, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Dr. Ernest Moniz, Secretary
Department of Energy
1000 Independence Ave. SW
Washington DC 20585

RE: Comments on the Jordon Cove Energy and Pacific Connector Gas Pipeline
Project: Draft Environmental Impact Statement and Public Interest Determination
Docket Numbers CP13-483-000, CP13-492-000, and 12-32-LNG.

Dear Secretary Bose:

Center for Sustainable Economy (CSE) has the following comments to offer on the Draft Environmental Impact Statement (DEIS) for the Jordon Cove Energy and Pacific Gas Pipeline Project and the final public interest determination that will be made with respect to export of natural gas from Coos Bay, Oregon.

CSE is non-profit public interest advocate for a transition to a carbon-free, sustainable economy. The Jordon Cove and Pacific Gas Pipeline proposal represents a significant threat to the safety, economic well being, and environmental quality of our members who use and enjoy the affected coastal wetlands that will be impacted by the Jordon Cove Liquefaction plant as well as forests, rivers, fish and wildlife that will be impacted all along the route of the Pacific Connector Gas Pipeline. Our members will also be harmed by the project's contribution to increased greenhouse gas emissions (GHG) and their far-reaching impacts on the global and regional climate.

For the reasons set forth below, we believe the DEIS contains significant omissions, unwarranted assumptions, and faulty reasoning that render it facially inadequate as a basis for decision-making. As such, it does not meet the terms of the Department of Energy's Office of Fossil Energy (DOE/FE) Conditional Order (3413) Granting Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel.¹ Moreover, even in its present, incomplete state, the DEIS

¹ Department of Energy, Office of Fossil Energy (DOE/FE). 2014. Jordon Cove Energy Project, L.P. FE Docket No. 12-32-LNG. Conditional Order Granting Multi-Contract Authorization to Export Liquefied

paints a grim portrait of significant and long term environmental and social harm and scant evidence of public benefit. This imbalance will only be made worse as the DEIS is remedied to document additional deleterious impacts. Because of this, the DOE cannot make a positive final determination that this project is in the public interest. Instead, Order 3413 must be rescinded. Our comments are provided below:

Comments on the DEIS

1. The DEIS analysis of greenhouse gas emissions, climate change, and responsive mitigation measures is seriously deficient.

The Jordon Cove Energy and Pacific Gas Pipeline Project (Proposed Action) is designed to increase the extraction, transport, liquefaction, and final consumption of natural gas. Greenhouse gas emissions (GHG) associated with this process will be substantial, and the contribution of anthropogenic GHGs to global climate change is undisputed. Also undisputed are the potential catastrophic impacts of climate change on society, the economy, and the environment in Oregon and across the globe. Because of this, the analysis of GHG emissions associated with federal projects is firmly embedded in the regulatory framework, as is the duty to disclose mitigation measures that reduce overall GHG emissions.² Judged by this regulatory standard, the DEIS analysis is seriously deficient.

The DEIS analysis of GHG emissions appears in Section 4.12.1.³ This section reports GHG emissions associated with construction (65,144 metric tons CO₂-e) and operation (2,100,753 metric tons CO₂-e/yr) of the Jordon Cove Energy and Pacific Gas Pipeline facilities and infrastructure. Emissions associated with operation could make the project the largest single source of GHG emissions in Oregon.⁴ A potentially greater source of GHG emissions will be associated with induced natural gas production upstream and combustion of natural gas downstream that would otherwise stay put in the ground. The GHG effects of this “induced” production and consumption of natural gas are excluded from consideration in the DEIS. In particular, the DEIS states “induced or additional natural gas production is not a ‘reasonably foreseeable’ indirect effect of the Project, and is not addressed in this NEPA document.”⁵

The problem is that in its public interest finding supporting Order 3413, DOE/FE cites induced production as one of the major economic benefits of the Proposed Action and, in fact, presents quantitative analysis in support of this conclusion. According to Order 3413:

Jordan Cove identifies direct economic contributions to four domestic industries, including interstate natural gas pipeline transportation, natural gas extraction, natural gas

Natural Gas by Vessel from the Jordon Cove LNG Terminal in Coos Bay, Oregon to Non-Free Trade Agreement Nations. DOE/FE Order 3413, March 24th, 2014.

² See, e.g. Council on Environmental Quality. 2014. Revised Draft Guidance for Federal Departments and

³ DEIS at 1-49: “Our analysis of CO₂ emissions can be found in section 4.12.1 of this EIS.”

⁴ Sickinger, Ted. 2014. “Jordon Cove LNG in Coos Bay could quickly become one of the largest greenhouse gas emitters in Oregon.” Oregon Live, 11/18/14, available online at: http://www.oregonlive.com/business/index.ssf/2014/11/jordan_cove_lng_in_coos_bay_co.html.

⁵ DEIS at 1-21.

exploration and development (E&D), and state and local government activities attributable to state gas severance taxes. These direct impacts are calculated in terms of the value of each industry's economic output *over what it would have been without the exports*. IMPLAN economic modeling is used also to calculate domestic secondary economic impacts, both indirect and induced. In summary, Jordan Cove states that the Upstream Contributions Study shows that the demand on upstream industries from the Jordan Cove exports will contribute an average of \$3.9 billion in direct, indirect, and induced annual outputs and will create an annual average of 20,359 new jobs (italics added).⁶

Thus, Secretary's assertion that induced natural gas production is not a reasonably foreseeable impact is in direct contradiction with facts presented in the project record. The environmental and social impacts of induced production, including impacts on GHG emissions, must be addressed in this EIS process in a manner at least as thorough and quantitative as the treatment of economic benefits of this induced production presented by Jordan Cove in its DOE/FE filings.

The second major flaw in the DEIS's treatment of GHG emissions is the total failure to discuss mitigation. Mitigation for GHG emissions is not contained in any of the mitigation measures proposed for federal or non-federal lands.⁷ NEPA regulations are explicit in their requirements with respect to mitigation. In particular, each EIS must contain a section analyzing the environmental consequences of the proposed action and its alternatives, including "[m]eans to mitigate adverse environmental impacts."⁸ As a significant adverse environmental impact associated with the Project, GHG emissions and their role in exacerbating climate change must be addressed by appropriate mitigation measures. This requirement has been underscored by CEQ in its latest guidance with respect to GHG emissions and NEPA. In particular:

Mitigation is an important component of an agency's considerations under NEPA, and this is no less true as it pertains to climate change. Mitigation, by definition, includes considering the avoidance of the impacts, minimizing them by limiting them, rectifying the impact, reducing or eliminating the impacts over time, or compensating for them. Consequently, agencies should consider reasonable mitigation measures and alternatives as provided for under the existing regulations to lower the level of the potential GHG emissions.⁹

2. The DEIS fails to analyze the impacts on fire risk and wildland fire management.

The Pacific Gas Pipeline (PGP) component of this project will traverse 150.1 miles of fire-adapted forest ecosystems.¹⁰ The dry summer climate of southwest and south central Oregon spawns frequent fires caused both by humans and ignited naturally by lightning. Fires are integral to the ecological health of forests in this region. As noted by the Klamath Bird Observatory, "[t]he mosaic of structurally diverse mixed-conifer hardwood forests in

⁶ DOE/FE 2014, Note 1 at 24.

⁷ DEIS at 2-51 to 2-70; DEIS at 2-74 to 2-75.

⁸ 40 CFR §1502.14(f).

⁹ CEQ 2014, Note 2 at 77828.

¹⁰ DEIS at 4-449.

southwestern Oregon was historically maintained by frequent mixed-severity wildfires.”¹¹ But aggressive fire suppression over the past century has jeopardized their health, and extent. As fire ecologist James Agee notes, “[t]he more intensely we have protected the forest from fire, insects, and disease, the worse many of our problems have become.”¹² Suppression of beneficial fires that helped regenerate trees, reduce competing vegetation, and control insects and disease have greatly altered forest structure and increased susceptibility to high intensity fires because of the buildup of fuels that would otherwise have been burned off regularly. Some fire-adapted forest types are disappearing altogether. For example, with respect to Oregon White Oak Forest, the DEIS notes that “[t]his forest type is a highly desirable wildlife habitat that has been decreasing as a result of fire suppression.”¹³

In response, federal and state forest managers have developed regional and forest-specific plans and policies that depend heavily on reintroduction of beneficial fires into these areas. For example, the Southwest Oregon Interagency Fire Management Plan recognizes the ecological benefits of fires and includes direction to “[u]se prescribed fire and unplanned natural ignitions considered the Use of Wildland Fire (UWF) for Resource Benefit to obtain and enhance the ecological attributes of the area.”¹⁴ The Pacific Gas Pipeline component will greatly complicate, and conflict with this management goal.

The DEIS clearly acknowledges that the PGP will complicate wildland fire management: “[t]he pipeline project would create fire suppression complexity by creation of a continuous corridor of early seral plant communities.”¹⁵ Yet the DEIS does not elaborate on what these complexities will be or how they can be mitigated. NEPA regulations are explicit in the need to identify management conflicts and how they can be resolved. In its NEPA guidance, CEQ states “the EIS must acknowledge and describe the extent of those conflicts. If there are any possibilities of resolving the conflicts, these should be explained as well.”¹⁶

The PGP presents a host of conflicts with federal wildland fire management. First is the elevation in fire risk associated with brushy (early seral) vegetation in the pipeline corridor and the potential for gas leaks and explosions from the pipeline and surface facilities igniting new fires. By clearing a 30-foot corridor of fire-adapted forest and replacing it with highly flammable brush and dry grasses, the PGP will increase the risk of fast moving wildfires. This issue was summarized most succinctly by former Coos County Commissioner Fred Messerle, who stated in 2010 that “[a]n open vector (right of way) with dry grass and brush creates a path for fire to ‘run

¹¹ Klamath Bird Observatory. 2012. Decision Support Tool. Mixed-conifer Hardwood Forests. Version 1.7. Ashland, Oregon: Klamath Bird Observatory.

¹² Agee, James. 1997. “Fire Management for the 21st Century.” In Kathryn Kohm and Jerry F. Franklin, eds. *Creating a Forestry for the 21st Century: The Science of Ecosystem Management*. Washington, DC: Island Press.

¹³ DEIS at 4-446.

¹⁴ USDA Forest Service, Rogue River-Siskiyou National Forest, Bureau of Land Management, Medford District, Oregon Department of Forestry, Southwest District, National Park Service, Oregon Caves National Monument. 2013. Southwest Oregon Interagency Fire Management Plan. Available online at: <http://www.fs.usda.gov/detail/rogue-siskiyou/home/?cid=stelprdb5314299>.

¹⁵ DEIS Table 2.1.4-1 at 2-59.

¹⁶ Council on Environmental Quality. Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations. Section 23a. 46 FR 18026 (March 23, 1981 as amended).

on.’ This means an increase in fire hazard exposure and risk in currently high timber production areas.’¹⁷ In light of this, FERC’s assertion that the corridor would serve as a fuel break is absurd.¹⁸ In fact, the corridor fails to even come close to minimum standards for fuel breaks endorsed by federal and state agencies and forest research institutions. To be effective, minimum widths of shaded fuel breaks are recommended to be over 200 feet in the drier parts of Oregon and Washington, and even larger in wetter areas where trees grow taller. Constant maintenance is needed to reduce, not foster, the growth of flammable brush.¹⁹

A more significant source of elevated fire risk will be associated with explosions. Natural gas pipelines are prone to explosive fires. The list of pipeline accidents and explosive fires along gas pipelines has been monitored and published regularly, and includes a grim list of accidents causing extreme loss of life, property, and fires.²⁰ Indeed, the DEIS identifies 1,237 such incidents between 1994 and 2013 from the national PHMSA Serious Incidents files maintained by the Department of Transportation. The DEIS is silent on this reasonably foreseeable consequence of the PGP. NEPA regulations define “reasonably foreseeable” impacts to include impacts that have catastrophic consequences, even if their probability of occurrence is low.²¹ Moreover, federal agencies managing forests along the route of the proposed PGP have sophisticated models that can be used to develop and analyze the consequences of a number of fire scenarios – such as a natural gas pipeline explosion under red flag warning conditions. In light of this, the DEIS should not have been limited to making passing references to pipeline explosions elsewhere, but instead should have analyzed the consequences of one should it occur along the PGP route.

The second major complication that the PGP presents to wildland fire management is the limitations imposed on use of beneficial fire. As noted above, federal and state forest management agencies in the PGP rely on restoring natural fire regimes to enhance ecological attributes of forests suffering from the adverse consequences of overly exuberant fire suppression over the past century. The PGP will reverse this trend by requiring additional suppression activities in places where policy calls for letting natural or, in some cases, human-caused fires to burn. Additional suppression will be required to protect surface facilities, but also to protect the underground pipeline from fires that burn along root systems deep beneath the ground. This conflict is neither noted nor discussed anywhere in the DEIS.

A third complication will involve hindrances to suppression activities. Underground pipelines complicate suppression activities because they limit the ability of responders to dig fire lines in

¹⁷ As quoted in Jody McCaffree, 2014. Surrebuttal comments on Coos County Pacific Connector Gas Pipeline application file number HBCU-13-06.

¹⁸ This assertion is often quoted in the DEIS. See, e.g. Table 2.1.4-1 at 2-59: “Construction of the pipeline and associated activities would remove both mature and developing stands and would increase fire suppression complexity however the corridor also provides a fuel break.”

¹⁹ See, e.g. Bennett, Michael. 2010. Reducing Fire Risk on Your Forest Property. Pacific Northwest Extension Publication PNW 618. Oregon State University, University of Idaho, and Washington State University.

²⁰ See, e.g. the Wikipedia updated list of pipeline accidents in the US since 2000:

http://en.wikipedia.org/wiki/List_of_pipeline_accidents_in_the_United_States_in_the_21st_century.

²¹ 40 CFR § 1502.22 (b) 1.

the face of encroaching fires. This complication has indeed manifested in many other places, and there is no reason to expect that it would not manifest along the PGP route as well.²²

3. The DEIS does not analyze the environmental impacts of alternatives.

At the heart of NEPA is the duty to analyze the environmental impacts not only of the Proposed Action but a range of reasonable alternatives. In particular, agencies must “[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.”²³ Yet for most issues addressed by the DEIS, the only alternative considered in any detail is the Proposed Action.

For example, in discussing the impacts of the Proposed Action on the types of land uses affected by construction and operation of the Jordon Cove Liquefaction facility, the DEIS only presents the acreage affected by the Proposed Action and fails to present how that acreage would differ under the various Coos Bay Terminal Alternatives discussed in Section 3.3.2.²⁴ As another example, the environmental impacts of the PGP on wildlife habitat types and species were only discussed in detail for the Proposed Action and not for any of the alternatives identified in Section 3.4.2.²⁵

4. The DEIS does not meet NEPA requirements for analysis of offsite mitigation.

To reduce overall environmental impact the Proposed Action relies extensively on offsite mitigation measures. As explained in the DEIS, “[a]n extensive offsite mitigation program on BLM and NFS lands is included in the Proposed Action to ensure that the objectives of the affected land management plans are achieved.”²⁶ Offsite mitigation is also being proposed as a means to compensate for the loss of wetlands associated with the Jordon Cove facility.²⁷ However, the DEIS also acknowledges that these mitigation measures are far from certain. With respect to Bureau of Land Management (BLM) and National Forest Service (NFS) land, the DEIS acknowledges that “[m]any of the projects listed in table 2.1.4-1 lack the site-specific surveys needed for implementation and, as a result, are not ripe for decision at this time.”²⁸ With respect to wetland mitigation, the DEIS acknowledges that Jordon Cove’s proposed compensatory wetland mitigation plan is deficient and has not been approved by either the Army Corp of Engineers (COE) or the Oregon Division of State Lands (ODSL) – agencies that have direct regulatory oversight over wetland fills and mitigation.²⁹

²²This point was illustrated well in a wildfire near a natural gas line in Mississippi last month: <http://www.msnewsnow.com/story/27979484/exclusive-wildfire-burns-dangerously-close-to-natural-gas-pipeline>.

²³ 40 CFR § 1502.14.

²⁴ DEIS at 4-5 and 4-6.

²⁵ DEIS at 4-507 to 4-510.

²⁶ DEIS at 2-51.

²⁷ DEIS at 4-409 and 4-410.

²⁸ Id.

²⁹ DEIS at 4-410.

Despite the uncertainty over mitigation, major segments of the DEIS and its conclusions rely on the assumption that offsite mitigation will be implemented, and effective. For example, in its conclusions with respect to impacts on vegetation and timber on federal lands, FERC concludes, “with the assistance from Pacific Connector, BLM and Forest Service would develop projects on federal lands to compensate for impacts associated with proposed amendments to their LMPs. Many of those projects would benefit forest health and contribute to the development of LSOG forest...”. These projects are the ones listed in Table 2.1.4-1. With respect to wetlands, the DEIS assumes that mitigation will be implemented and effective and thus contains no actual analysis of the impacts associated with the loss of 38 acres of natural wetlands affected by construction activities and another 35.6 acres permanently affected by facility operation. Instead, FERC simply concludes that “Jordan Cove would follow the measures in its *Project Compensatory Wetland Mitigation Plan*, including the creation of 7.5 acres of eelgrass in Coos Bay, and the reestablishment of tidal flow to 43.3 acres at the Kentucky Slough site to mitigate for the loss of estuarine wetlands.”³⁰

The assumptions of full implementation and efficacy are impermissible under existing regulations. CEQ guidance in this respect is unambiguous: “[a]gencies should not commit to mitigation measures considered and analyzed in an EIS or EA if there are insufficient legal authorities, or it is not reasonable to foresee the availability of sufficient resources, to perform or ensure the performance of the mitigation.”³¹ Here, the term “commit” refers to the assumption of full and effective implementation. FERC does not have sufficient legal authorities to ensure implementation of mitigation measures on BLM or NFS lands or on jurisdictional wetlands regulated by COE or ODSL. Moreover, even if FERC did have this authority or secure binding commitments from other agencies to enforce them, the efficacy of the proposed mitigation measures cannot be assumed to be beneficial. Scientific uncertainty must be recognized where it exists.³²

Case in point is the 6,600 acres of thinning treatments planned for BLM and NFS lands ostensibly to improve habitat for the northern spotted owl, accelerate the restoration of late successional and old growth (LSOG) forests, and reduce fire risk.³³ There is significant scientific uncertainty about the actual impacts of such treatments. In fact, scores of scientific studies and monitoring data on the ground provide evidence that thinning treatments will, in fact, be detrimental to the owl and its habitat and exacerbate not reduce fire risk.³⁴ Yet FERC’s

³⁰ DEIS at 5-9.

³¹ Council on Environmental Quality (CEQ). 2011. Memorandum for Heads of Federal Departments and Agencies: Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.

³² 40 CFR § 1502.22 (b) 1.

³³ Details of these planned treatments appear in the DEIS at Table 2.1.4-1, pages 2-60 to 2-61.

³⁴ In particular, “[s]potted owls nest and roost in forests with high canopy closure, large trees, large woody debris, and vertical and horizontal diversity in stand structure, (Thomas et al. 1990) all characteristics that thinning and logging will affect negatively. From: DellaSala, Dominick, Robert G. Anthony, Monica L. Bond, Erik S. Fernandez, Chris A. Frissell, Chad T. Hanson and Randi Spivak. 2013. “Alternative views of a restoration framework for federal forests in the Pacific Northwest.” *Journal of Forestry* 111(6): 420-429.

assumption is to the contrary and leads the agency to conclude that these treatments will be unequivocally beneficial.

Another flaw in FERC's consideration of offsite mitigation is the failure to analyze mitigation alternatives, including an alternative that excludes mitigation measures altogether.³⁵ Again, NEPA regulations are explicit in a federal agency's duty to analyze mitigation alternatives in an EIS.³⁶ Instead, the DEIS assumes an identical set of mitigation measures for each action alternative considered. For example, the same suite of projects for mitigating the impacts on late successional forests is considered for each alternative despite their scientific uncertainty.³⁷ This subverts the ability of the DEIS to inform the public and decision makers about the environmental impacts – both beneficial and adverse – associated with mitigation. This is why BLM NEPA guidance is explicit in this regard: “[t]he NEPA document should analyze the proposal with and without offsite mitigation in at least two separate alternatives and in light of the best available science.”³⁸

5. The financial efficiency analysis omits significant public costs.

The DEIS incorporates a financial efficiency analysis to quantify the impacts of the PGP on federal finances.³⁹ The analysis identifies two sources of direct government revenue: 1) Pacific Connector's payment for timber that would need to be cut, and 2) Pacific Connector's rental payments for construction access and the pipeline right-of-way. The analysis also identifies three sources of government costs, including: 1) the value of lost timber productivity along the new right-of-way, 2) the value of non-merchantable trees that would need to be cut prematurely (lost timber growth), and 3) the incremental cost of future maintenance for existing roads that Pacific Connector may upgrade above their existing federal maintenance level. Based on this analysis, the DEIS concludes that the PGP would have a net present value of \$5.24 million in 2010 dollars.

This financial efficiency analysis excludes significant public costs and public financial risks. Public costs associated with the numerous land and resource management planning activities, agency consultations, and permitting needed to accommodate the project are conspicuously absent. Public costs associated with an increase in management requirements are also excluded. For example, the PGP will necessitate an increase in public agency fire suppression and response costs. The DEIS asserts that the PGP “would not significantly increase fire suppression costs,” but there is no analysis to support this conclusion.⁴⁰ In fact, suppression costs will soar in segments of the pipeline where surrounding forests are currently managed for natural beneficial fires that would otherwise be free to burn.

³⁵ See also comments presented in Section 3, above.

³⁶ 40 CFR § 1502.14 (f).

³⁷ DEIS at 3-64.

³⁸ USDI Bureau of Land Management. September 30th, 2008, Instruction Memorandum on Policy for the Use of Offsite Mitigation. Available online at:

http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2008/IM_2008-204.html.

³⁹ DEIS at 4-832.

⁴⁰ DEIS at 4-991.

A more significant gap in the financial efficiency analysis is the exclusion of an estimate of financial and economic risk associated with catastrophic explosions, wildfires, and emergency response. There are well known techniques for translating such risks into financial and economic analysis that entail assigning probabilities to catastrophic events of a certain magnitude, fully describing the public financial risks and economic costs associated with those events, converting this information into an annualized expected value stream, and discounting back to the present to obtain present value figures.⁴¹ Understanding the magnitude of financial and economic risks associated with the Proposed Action is a critical factor in determining whether or not the Proposed Action is in the public interest. Despite this, the DEIS fails to quantify these financial or economic risks at all for either the PGP or Jordon Cove components of the Proposed Action.

Comments on the DOE/FE Public Interest Determination

The Department of Energy's Office of Fossil Energy (DOE/FE) initial authorization and public interest finding with respect to the Jordon Cove Energy Project was conditional on completing an adequate EIS. As DOE/FE stated clearly in the context of order 3413, "[t]he authorization granted by this Order is conditioned on Jordan Cove's satisfactory completion of the environmental review process under NEPA in FERC Docket Nos. CP13-483- 000 and CP13-492-000, and on issuance by DOE/FE of findings of no significant impact or a record of decision pursuant to NEPA. Additionally, the authorization is conditioned on Jordan Cove's on-going compliance with any and all preventative and mitigative measures at the Jordan Cove Terminal imposed by federal or state agencies."⁴²

For the foregoing reasons, it is clear that Jordon Cove has not yet met this standard and will not if the DEIS in its present form is adopted. Moreover, and as we have discussed with respect to offsite mitigation, it is unreasonable to assume that all preventative and mitigative measures will be implemented and effective under current arrangements specified by the DEIS. However, even if the DEIS was remedied and binding commitment to implement effective mitigation measures secured, it is clear that the DEIS paints a grim picture of environmental harm to Oregon and little if any net economic benefit.

Oregonians will be left with a grim legacy of catastrophic disaster risk, increased fiscal and economic costs, fragmented or permanently degraded habitat for wildlife and fish, scenic landscapes marred by the pipeline corridor and confiscated private properties all for the benefit of natural gas producers in Canada and Asian consumers.

⁴¹ See, e.g. Jonkman, S.N., P.H.A.H.M van Gelder and J.K. Vrijling. 2003. "An overview of quantitative risk measures for loss of life and economic damage." *Journal of Hazardous Materials* A99(2003) 1-30; See also, Abrahamsen, E.B., T. Aven, J.E. Vinnem, and H.S. Wiencke. 2004. "Safety management and the use of expected values." *Risk Decision and Policy* 9: 347-357.

⁴² Department of Energy, Office of Fossil Energy (DOE/FE). 2014. Jordon Cove Energy Project, L.P. FE Docket No. 12-32-LNG. Conditional Order Granting Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Jordon Cove LNG Terminal in Coos Bay, Oregon to Non-Free Trade Agreement Nations. DOE/FE Order 3413, March 24th, 2014.

DOE/FE has agreed to a reconsideration of its public determination after the environmental review process is complete: “[w]hen the environmental review is complete, DOE/FE will reconsider its public interest determination in light of the information gathered as part of that review.”⁴³

In light of the overwhelming evidence presented by the DEIS, there is no basis whatsoever for issuing a final public interest determination. Instead, Order 3413 should be rescinded.

Sincerely,

A handwritten signature in black ink, appearing to read "H. John Talberth". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

H. John Talberth, Ph.D.
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⁴³ Id. at 141.