
APPENDIX R

Comments on the Draft EIS and Responses

(continued)

Moreover, the investigations of the Federal Trade Commission had disclosed that the majority of the pipe-line mileage in the country used to transport natural gas, together with an increasing percentage of the natural gas supply for pipe-line transportation, had been acquired by a handful of holding companies... State commissions, independent producers, and communities having or seeking the service were growing quite helpless against these combinations. These were the types of problems with which those participating in the hearings were pre-occupied. Congress addressed itself to those specific evils.

"As the industry developed, ownership of the pipelines came to be concentrated in the hands of a few companies, and state utility commissions, which had regulated intrastate pipeline sales to local distributors, found themselves unable, because of a combination of factors, to regulate the prices of the new interstate giants." *Texas Gulf Coast Area Natural Gas Rate Cases v. FPC*, 487 F.2d 1043, 1091 (D.C. Cir. 1973).

Congress responded with the Natural Gas Act, whose provisions "were plainly designed to protect the consumer interests against exploitation at the hands of private natural gas companies." *Federal Power Com. v. Hope Natural Gas Co.*, 320 U.S. 591, 612 (1944). "The Act was so framed as to afford consumers a complete, permanent and effective bond of protection from excessive rates and charges." *Atlantic Ref. Co. v. PSC of New York*, 360 U.S. 378, 388 (1959).

In short, the entire purpose of the NGA was to protect U.S. natural gas consumers. This was reflected in section 1(a) of the Act, which noted "that the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest". Thus while the NGA contemplated the regulation of the import and export of natural gas in § 3, that section must be read in light of Congress's goal of protecting U.S. consumers.

B. Historically, FERC has failed to describe any benefit to U.S. consumers in almost all of its section 7 determinations for pipelines serving LNG export facilities.

FERC has historically sidestepped the issue of what benefits accrue to U.S. consumers from exports of LNG. FERC has issued section 3 authorization and accompanying section 7 certificates

IND471-15
cont.

to 12 LNG facilities in the U.S.¹⁶ Of these 12 facilities, three needed them only for minor modifications of existing pipeline infrastructure: Cove Point (CP13-113; 9/29/2014; 148 FERC ¶ 61,244), Freeport (CP12-509-000; 7/30/14; 148 FERC ¶ 61,076)¹⁷, and Magnolia (CP14-347; 4/15/16; 155 FERC ¶ 61,033), and nine needed them for new pipeline construction. In seven of those nine facilities that needed § 7 certificates, FERC either simply said there are benefits that outweigh the other Certificate Policy Statement criteria without listing or describing those benefits in any way (five facilities), or cited the unquantified economic benefits DOE found in its decisions granting authority for the facility to export to non-Free Trade Agreement (“non-FTA”) countries (two facilities). One of the remaining two (Corpus Christi; CP12-507; 12/30/14; 149 FERC ¶ 61,283), is also an import facility, which FERC did not say would benefit U.S. natural gas consumers, but it is possible that could have come to pass. Thus in only one of these decisions did FERC describe tangible benefits that might accrue to U.S. consumers from the pipeline’s construction.

No benefits/export itself is the benefit. In five of the section 7 certificates, FERC cites no benefits whatsoever, or that the benefits are simply the export of natural gas:

Driftwood (CP17-117; 4/18/19; 167 FERC ¶ 61,054 para. 35): “Driftwood Pipeline’s proposed project will enable it to transport natural gas to the Driftwood LNG Project, where the gas will be liquefied for export.” In other words, the mere export of natural gas is the benefit.

Golden Pass (CP14-518-000; 12/21/2016; 157 FERC ¶ 61,222 para. 32): “Based on the benefits the proposed project will provide and the minimal adverse effect on existing customers, other pipelines and their captive customers, landowners, and surrounding communities, we find . . .” But FERC referred to “the benefits the proposed project will provide” *without ever stating what those*

¹⁶ One other authorized facility (Delfin) is located offshore and is not permitted by FERC.

¹⁷ In 2005, FERC granted Freeport permission to export a specific amount of LNG that it had previously imported for its facility that it no longer needed, and gave Freeport 24 months to so.

IND471-15
cont.

benefits would be.

Port Arthur (CP17-20; 4/18/19; 167 FERC ¶ 61,052 para. 36): Again, FERC's conclusory determination: "In view of the considerations above, we find that Port Arthur Pipeline has demonstrated a need for the Louisiana Connector and Texas Connector projects, and that the benefits each project would provide outweigh their adverse effects on existing customers, other pipelines and their captive customers, landowners, and surrounding communities." Once again, nowhere in the document does FERC ever describe the alleged "benefits each project would provide".

Sabine Pass (CP13-552; 4/6/2015; 151 FERC ¶ 61,012 para. 37): "Creole Trail's proposal will enable it to transport increased quantities of domestically-sourced gas to Sabine Pass's LNG terminal where the gas will be liquefied for export." Like Driftwood, the benefit is apparently nothing more than the export of natural gas.

Venture Global (CP15-550; 2/21/2019; 166 FERC ¶ 61,144 para. 25): "TransCameron's proposed pipeline will enable it to transport domestically-sourced gas to the Calcasieu Pass LNG terminal, where the gas will be liquefied for export." This is the same approach as Driftwood and Sabine Pass- exporting natural gas is the "benefit."

Unquantified economic benefits

In two of the section 7 certificates, FERC cites only to DOE's statements in its NFTA decisions to the effect that exports would result in increased production that could inure to the benefit of U.S. consumers, followed by recitation of the vague and unquantified economic benefits that DOE found:

Cameron (CP13-25-000; 6/19/2014; 147 FERC ¶ 61,230 para. 29; footnotes omitted) cites DOE's NFTA decision:

Among other things, DOE found that exports from Cameron LNG's facility would result in increased production that could be used for domestic requirements if market conditions

20190705-5199 FERC PDF (Unofficial) 7/5/2019 3:39:50 PM

IND471 continued, page 51 of 75

warrant such use, which would tend to enhance U.S. domestic energy security. DOE also found several other tangible economic and public benefits that are likely to follow from the requested authorization, including increased economic activity and job creation, support for continued natural gas exploration, and increased tax revenues.

Lake Charles (CP14-119; 12/17/2015; 153 FERC ¶ 61,300 para. 37) cites DOE's NFIA

findings:

In conditionally granting LCE long-term authorization to export LNG from the terminal, DOE recognized substantial evidence of economic and other public benefits, concluding that the authorization was not inconsistent with the public interest. We recognize DOE's public interest findings in issuing our order. Among other things, DOE found that exporting natural gas will lead to net benefits to the U.S. economy and can counteract concentration within global LNG markets, thereby diversifying international supply options and improving energy security for U.S. allies and trading partners. On balance, DOE found that the likely net economic benefits and other non-economic or indirect benefits outweighed the potential negative impacts of the proposed exports.

Tangible benefits to U.S. consumers from the section 7 decision:

In only one of these section 7 decisions did FERC give any detail beyond vague allusions to "energy security" and "economic benefits" as to what actual benefits the section 7 activities might provide to U.S. consumers:

Southern (CP14-103; 6/1/16; 155 FERC ¶ 61,219 paras. 35, 37):

Further, by facilitating the transportation of natural gas to the terminal for liquefaction and export, as well as to multiple markets in the southeastern U.S., the Elba Express Modification Project will provide a critical transportation link and will increase the supply options available for shippers connected to Elba Express's system. . . . 37. The Elba Express Modification Project is fully subscribed and the shippers will have access to new markets and supplies. Further, the project will facilitate the bi-directional flow of natural gas on the Elba Express Pipeline and thus enhance flexibility and reliability for new and existing customers.

C. Exporting Domestically-Produced Natural Gas That Does Not Benefit U.S. Consumers is not a Valid Purpose Under the NGA.

Citing the Commission's "Certificate Policy Statement"¹⁸, the DEIS describes FERC's role in deciding the applications before it in this proceeding:

¹⁸ *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), clarified in 90 FERC ¶ 61,128, and further clarified in 92 ¶ 61,094 (2000).

IND471-15
cont.

Specifically, regarding whether to authorize the siting of an LNG terminal under NGA Section 3, the Commission would approve the proposal unless it finds the proposed facilities would not be consistent with the public interest. In considering whether or not to issue a Certificate to a natural gas pipeline under NGA Section 7, the Commission would balance public benefits against potential adverse consequences, as documented in the Order. The Commission bases its decision on technical competence, financing, rates, market demand, gas supply, environmental effects, long-term feasibility, and other issues concerning a proposed project.

IND471-15
cont.

DEIS 1-7 (footnote omitted). As FERC described it in its previous rejection of this project:

The purpose of the Certificate Policy Statement is to establish criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to consider other interests, including environmental impacts. 157 FERC ¶ 61,194 at ¶ 29.

One remarkable thing about Jordan Cove is that the only public benefits that the DEIS identifies are a handful of purely economic ones: jobs (almost all temporary) and taxes (mostly unquantified). And because almost all of those are merely the temporary benefits that come from building the Project, those are not even a useful “benefit” metric for purposes of either the Natural Gas Act nor the Takings Clause, since the same will always be true for any and all infrastructure projects. The DEIS does not describe any benefits to U.S. gas consumers (or anyone else, aside from the local economic ones) from the Project. This is not surprising, given FERC’s historical difficulty in finding any such benefits from LNG export facilities.

Assuming, *arguendo*, that permanent jobs and permanent tax revenue would properly qualify as “benefits” for purposes of either NGA section 3 or section 7, or the Takings Clause, the Facility itself will provide at most (according to Jordan Cove’s almost certainly inflated numbers) 200 permanent jobs (DEIS 4-594), another 1,602 jobs supported by Project spending (*id.*) and some undetermined amount of tax revenue. In fact, the entire discussion of the Facility’s post-construction impact on tax revenue is contained in less than a single sentence: “operation of the Jordan Cove LNG Project would also generate state and local tax revenues, including revenues from payroll taxes.” *Id.*

In addition to the Facility, the Pipeline is expected to create 15 permanent jobs (DEIS 4-604), and the discussion of the Pipeline's post-construction impact on taxes is at least somewhat more specific than the discussion of the Facility's: "Over the initial 20 years of operations, the pipeline is expected to generate approximately \$4.7 million in average annual property taxes in Coos and Douglas Counties and approximately \$5.3 million in average annual property taxes in Jackson and Klamath Counties". DEIS 4-611. And while the DEIS admits that, "Property tax payments would vary over time due to pipeline depreciation and changing tax rates" (*id.*), Landowners note that the 20-year timeframe is illusory since the Pipeline would certainly be fully depreciated long before that.

In short, the DEIS identifies *no* "public" benefits beyond those purely economic ones. And while FERC interprets the CPS to mean it only has to weigh those economic benefits against adverse economic impacts, the DEIS nowhere quantifies what those adverse economic impacts might be. In fact, the DEIS does such a good job of not quantifying any "adverse effects on economic interests" it is difficult to discover if the DEIS has described any such impacts at all. Thus the DEIS allows FERC to compare (somewhat) defined quantitative "benefits" against undefined and unquantified adverse effects, and no one reading the DEIS would have any doubt as to how that comparison would turn out.

More importantly, the DEIS does not even attempt to identify *any* public benefit from the Project concerning natural gas: not natural gas production, natural gas distribution, natural gas prices for consumers, etc. Nothing. Since the entire purpose of the NGA was to protect U.S. consumers, it is impossible to see how any benefit described in the DEIS achieves – or even tries to achieve – that objective.

D. FERC cannot use section 7 to authorize a pipeline carrying 100% of its gas for export; FERC may only authorize such a pipeline under section 3.

When Congress enacted the Natural Gas Act in 1938 (June 21, 1938, ch. 556, §3, 52 Stat.

IND471-15
cont.

822), it created two different regimes for pipelines, one in section 3, and one in section 7. Section 3 granted the Commission¹⁹ authority to permit import and export of natural gas, and section 7 granted the Commission, the authority to permit interstate natural gas pipelines. At that time, Congress did not provide for the use of eminent domain for either import/export pipelines under section 3, or interstate pipelines in section 7.

When Congress amended section 7 in 1947 to provide eminent domain authority for interstate pipelines (July 25, 1947, ch. 333, 61 Stat. 459), it did so in order to fill the gap created by state court decisions holding that such interstate pipelines were not entitled to use state eminent domain procedures:

In many of the States, such as Missouri, Illinois, Indiana, West Virginia, and others, the constitutions and statutes of such States,¹ which confer the right of eminent domain; provide that property may be taken for public use. The term "public use" has been construed by the courts to mean for the use of the public of the particular State conferring the right of eminent domain.

S. Rep. 429 (July 3, 1947), p. 2. Thus interstate pipelines which "[do] not distribute natural gas in each of the States crossed, would not have the right of eminent domain under the constitutions and statutes of such States authorizing the taking of property for a public use." *Id.* And so Congress remedied this situation by adding federal eminent domain authority in section 7(h).

But even though export pipelines would also run into the exact same "public use" limitations under state law as interstate pipelines, Congress did not grant eminent domain authority to those pipelines. The legislative history of the 1947 amendment (H. Rep. 695, June 25, 1947, and S. Rep. 429, July 3, 1947) makes no mention of section 3, and there was no floor debate on the bill (1947 Cong. Record 8351).

Congress did amend section 3 in 1992, adding subsections (b) and (c), and redesignating the

¹⁹ The statute granted these authorities to the Federal Power Commission; section 3 authority was subsequently delegated to the Department of Energy, which in turn re-delegated certain duties to FERC. Section 7 authority was subsequently delegated to FERC.

IND471-15
cont.

original section 3 as section 3(a) (Pub. Law 102-486, Title II § 201, October 24, 1992), but leaving the text unchanged. It reads:

After six months from June 21, 1938, no person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the Commission authorizing it to do so. The Commission shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest. The Commission may by its order grant such application, in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate, and may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate.

In 2005, Congress amended section 3 to add subsections (d)-(f), and in subsection (e) gave FERC “the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal.” Congress did not give eminent domain authority to LNG terminals, and in adding the definition of “LNG terminal” to section 2, specifically carved out of that definition, “any pipeline or storage facility subject to the jurisdiction of the Commission under section 7.”

Thus, when Congress amended section 3 to address LNG facilities, export pipelines did not have eminent domain authority, and presumably Congress wanted things to stay that way. And there is nothing in what Congress did in 2005 to indicate that it was intending to convert export pipelines into interstate pipelines merely because the same pipeline would now be supplying an export facility, as opposed to directly crossing a border itself. In fact, by carving out section 7 pipelines from the “LNG terminal”, Congress was making it clear that it did not want to change how section 7 pipelines were treated should any of those now also connect to an LNG export facility.

In fact, Congress clearly intended section 3 pipelines to continue to be treated as such even if they now connected to an LNG export facility. When Congress amended the NGA, not only did it do so against the backdrop of a prominent D.C. Circuit decision holding that a gas pipeline

IND471-15
cont.

providing gas to a third party within the United States, and who then transferred the gas across the border to Mexico, was subject to section 3 and *not* section 7, but it was a case that Congress had been repeatedly asked to legislatively overrule and had consistently declined to do so.

In *Border Pipe Line Co. v. Federal Power Commission*, 171 F.2d 149, 150 (D.C. Cir. 1948) the petitioner owned and operated a pipeline that “sells its gas at its terminus near the Rio Grande River to an industrial consumer which transports the gas into Mexico”. The Petitioner was operating under a section 3 permit (*id.* at 150, n. 1), but subsequently the Commission decided that the pipeline was subject to section 7.

The Court disagreed, holding that this was an export pipeline subject to section 3, and not section 7, on the grounds that section 7 only applied to pipelines in interstate commerce, and – despite the fact that the pipeline delivered its gas to a third party who then shipped it over the border – this was an export pipeline.

Congress was well aware of the *Border Pipe Line* decision; in fact, when the Commission asked the D.C. Circuit to overrule it 26 years later in *Distrigas Corp. Federal Power Commission*, 495 F.2d 1057, 1063 (1974) (footnotes omitted and added), it declined to do so, noting that:

Since *Border*, the Commission has asked Congress, on fourteen separate occasions, to enact legislation overruling it; each time, Congress has refused. Indeed, in 1953, Congress amended the Federal Power Act to include the equivalent of the *Border* interpretation, thus implicitly approving it.²⁰

Thus in 2005 Congress legislated while knowing full well that a pipeline exclusively supplying an LNG export facility would be treated as a section 3 pipeline, and that section 3 facilities do not have eminent domain authority.

²⁰ The Federal Power Act amendment that the Court cited is 16 U.S.C. § 824a(f), which provides: “The ownership or operation of facilities for the transmission or sale at wholesale of electric energy which is (i) generated within a State and transmitted from the State across an international boundary and not thereafter transmitted into any other State . . . shall not make a person a public utility subject to regulation as such under other provisions of this subchapter.”

IND471-15
cont.

The distinction between sections 3 and 7 runs even deeper in the context of eminent domain. Under section 3, the Commission shall grant the application, unless “it finds that the proposed exportation or importation will not be consistent with the public interest.” That is a far different test than what Congress used in section 7, where the Commission shall issue approve the application if it finds both that the applicant “is able and willing properly to do the acts and to perform the service proposed”, and that the proposed action “is or will be required by the present or future public convenience and necessity.”

Thus section 7 has two criteria that section 3 does not, and Congress was aware of both when it added eminent domain authority in 1947. The first is that under section 7, the Commission must affirmatively find that the applicant will be able to do what it proposes to do, while no such finding is required under section 3. This makes perfect sense if the consequence of the Commission granting a Certificate means that the applicant then gets to forcibly take people's property; Congress certainly didn't want property taken if the project were not going to actually get built. As discussed below, this has become a serious issue in connection with the Commission's practice of granting conditioned certificates, which can (and has) resulted in the taking and destruction of private property for projects that are never built.

The second significant difference is between a finding that something is “not consistent with the public interest” and a finding that something is “required by the present or future public convenience and necessity.” In 1938, and in 1947 when Congress added section 7's eminent domain provision, “public interest” was not a legal term of art used in conjunction with the exercise of eminent domain, while “public convenience and necessity” most certainly was, and had been for decades. See, e.g., *Brown v. Preston*, 38 Conn. 219, 224 (Sup. Ct. 1871) (“Although the statute contains no express authority, yet we think it may be clearly implied in cases where public convenience and necessity demand a highway across a navigable stream of water. Towns in the

IND471-15
cont.

construction of highways exercise the right of eminent domain, which right is delegated to them by the legislature.”); *Stearns v. Hinsdale*, 61 N.H. 433, 435 (Sup. Ct. 1881) (“The effect of these provisions is to apply an essentially different principle in the case of proposed highways between this state and Vermont than obtains in the case of highways generally, which can legally be established only when required by the public convenience and necessity and through the exercise of the right of eminent domain . . .”); *Hayden v. Skillings*, 78 Me. 413, 416 (Sup. Ct. 1886) (“It is common learning that railroads are of public convenience and necessity, and that when the corporations can not purchase the land for their location and use, they may take it by right of eminent domain on payment of the damages legally assessed therefor . . .”); *Plattsburgh v. Nebraska Tel. Co.*, 80 Neb. 460, 465 (Sup. Ct. 1908) (“The use of the telegraph and telephone is so far a public convenience and necessity that in some states property may be condemned therefore under the power of eminent domain.”); *Hudson & M. R. Co. v. Wendel*, 193 N.Y. 166, 176 (Ct. of Appeals 1908) (“In all cases where private property is taken for public convenience the extent and quality of the interest in the property taken should be measured by public convenience and necessity. In construing statutes relating to taking private property for public use the reason for the exercise of the power of eminent domain must be kept in mind . . .”)

It is axiomatic that different words same statute same time must have different meanings. “A presumption that a single word means the same thing throughout a statute goes together with a presumption that different words mean different things.” *Medical College of Wis. Affiliated Hosps., Inc. v. United States*, 854 F.3d 930, 933 (7th Cir. 2017). Congress created two entirely distinct approval criteria in sections 3 and 7, with the section 7 criteria – a finding that the applicant can do what it is proposing to do, and a finding that the project is necessary for public convenience and necessity – fitting perfectly with the subsequent addition of eminent domain authority for certificate holders.

IND471-15
cont.

20190705-5199 FERC PDF (Unofficial) 7/5/2019 3:39:50 PM

IV. EXPORTING FOREIGN NATURAL GAS IS NOT A VALID PURPOSE UNDER THE NGA.

A. Jordan Cove will export primarily or exclusively Canadian gas.

The DEIS is inadequate because it does not include any reference to or information about Jordan Cove's license from the Canadian government to import natural gas to the U.S. ~~for the express purpose of supplying all of the Project's natural gas.~~ Instead, there is nothing more than intentionally ambiguous statements such as "Jordan Cove states the purpose of its project is to export natural gas supplies derived from existing interstate natural gas transmission systems (linked to the Rocky Mountain region and Western Canada) to overseas markets . . ." DEIS 1-6; 3-4. Throughout, the DEIS mentions the US and Canada as the two sources for Jordan Cove's gas, with no further details.

This is affirmatively misleading, because the DEIS does not contain, or make any mention of, either Jordan Cove's Canadian natural gas export permit for up to 1.55 bcf/d (the Project's maximum requirement) nor its counterpart DOE import permit for the same quantity of gas. Jordan Cove expressly applied for both for the purpose of importing Canadian gas to meet *all* of the Project's feedstock needs.

On September 9, 2013, Jordan Cove LNG L.P. applied to Canada's National Energy Board ("NEB") "for a licence authorizing the export of up to 565.75 billion cubic feet ("Bcf") of gas per year (approximately 16,026,458 10³m³ per year) for a term of 25 years." *Exhibit 19*, p. 1. Jordan Cove was explicit in its reasons for wanting to export Canadian gas to the U.S.: "The quantity of gas requested for export under the Licence is necessary to support a liquefied natural gas ("LNG") facility (the "LNG Facility") to be located at the Port of Coos Bay, Oregon (the "Project") which has been proposed by Jordan Cove Energy Project L.P. ("JCEP)." *Id.*, p. 2. Jordan Cove was equally explicit about the purpose of the Pacific Connector pipeline:

7. Pipeline ("PCGP") proposed by Pacific Connector Gas Pipeline L.P. ("Pacific

IND471 continued, page 59 of 75

IND471-16 It is the Department of Energy, not the FERC, that regulates the U.S. Energy policy and determine if natural gas can be exported. This decision is outside of the scope of this EIS.

IND471-16

20190705-5199 PERC PDF (Unofficial) 7/5/2019 3:39:50 PM

IND471 continued, page 60 of 75

Connector"), also more fully described in Appendix A – Project Description. The PCGP will deliver feed gas to the Project from Malin, Oregon, after it has been gathered there from supply in the Western Canadian Sedimentary Basin ("WCSB"), the United States Rockies, and potentially other supply-basins in North America.

Despite the reference to gas from the U.S. Rockies, the very next paragraph clarified that, in fact, all of Jordan Cove's gas would be coming from Canada:

Given the gas needs of the various components of the Project (such as power generation), and accounting for fuel consumption by the pipelines that will deliver natural gas to the Project, the annual volume of gas requested for export from Canada under the authority of the Licence (565.75 Bcf/year) exceeds the annual volume of gas to be exported from the outlet of the LNG Facility in the United States (502.81 Bcf/year). Appendix B –Export Volumes provides detailed export information taking into account these needs, losses and phasing of the Project.

In the section of the application labeled "Gas Supply", Jordan Cove stated:

14. At full build-out, the Project will be capable of producing 9 MMt/y of LNG for export. In order to produce that amount of LNG, the Applicant, through its customers, will be required to export no less than 565.75 Bcf/y or 1.55 Bcd/d through the Export Points.

15. The Applicant, as agent on behalf of its customers, will be exporting gas that is produced from the WCSB. As noted above, customers may have varying means of acquiring gas for exportation such as production from existing reserves, contingent reserves, prospective resources, and/or future net acquisitions and open market purchases or swaps made at WCSB market hubs.

18. The points of export for the gas will be at Kingsgate/Eastport and Huntingdon/Sumas. Subject to fuel consumption associated with transport by the pipelines delivering natural gas to the Project, it is anticipated that all of the requested quantity of gas for export under the Licence will be devoted to Project needs (including operations other than LNG development, such as power generation).

Exc. 19.

Jordan Cove also submitted a report prepared for it by Navigant Consulting to support its statement that these exports would not result in exporting gas which Canada needed for its domestic consumption. Navigant Consulting, September 2013. *Supply and Demand Market Assessment and Surplus Evaluation Report, Exhibit 20*, Appendix C. In that report, Navigant confirmed that Jordan Cove applied for Canadian export authority for gas sufficient to cover the entirety of potential LNG shipments from the project and "anticipates sourcing much, if not all, of its exports from Canadian natural gas supplies." *Id.* p. 1.

20190705-5199 PERC PDF (Unofficial) 7/5/2019 3:39:50 PM

IND471 continued, page 61 of 75

On November 14, 2013, the NEB asked Jordan Cove why it was requesting an annual “variance” in annual export volume of up to 15%, noting that Jordan Cove’s application had mentioned U.S. gas as a possible source of supply, and asking if Jordan Cove intended to use that 15% variance in order to reduce exports of Canadian gas in favor of buying U.S. gas instead. Jordan Cove assured the NEB that nothing was further from its mind:

In this regard, Jordan Cove LNG confirms that the mention of the U.S. Rocky Mountain region in Reference iii) simply relates to a potential option for obtaining gas resources for the LNG facility. Like other Canadian LNG export applicants, Jordan Cove LNG seeks to preserve the flexibility to source all of its project requirements from Canada even if those requirements may vary within its requested tolerance levels from year to year.

Inquiry Response, *Exhibit 21*, p. 2 (emphasis added). Furthermore (*id.*)(emphasis added):

Jordan Cove LNG is in the same position as LNG Canada and other applicants who have requested an LNG export licence from the NEB and who seek the ability to supply 100 per cent of their project requirements from Canada. The requested tolerance would allow Jordan Cove LNG to maximize its use of Canadian gas despite variations in plant requirements from year to year.

Following receipt of this Response, on February 20, 2014 the NEB issued the required license to Jordan Cove, expressly for the purpose of supplying the Project: “The quantity of gas requested for export under the Licence is necessary to support a liquefied natural gas (LNG) export facility to be located at the Port of Coos Bay, Oregon.” NEB Export License, *Exhibit 22*, p. 2.

However, Jordan Cove also needed corresponding import permission from the U.S. Department of Energy (“DOE”), and on October 21, 2013, it applied to DOE for permission to import 565.75 billion cubic feet per year (Bcf/yr)/ 1.55 Bcf per day (Bcf/d), for a 25-year term. Jordan Cove sought this authorization “to import the natural gas from Canada by pipeline, at points near Kingsgate and Huntingdon, British Columbia, to a proposed liquefied natural gas (LNG) export facility to be located at the Port of Coos Bay, Oregon.” *See Exhibit 23*, p. 2, DOE Order. DOE granted the request; in fact, the title of DOE’s order was “Order Granting Long-Term Multi-Contract Authorization to Import Natural Gas from Canada to the Proposed Jordan Cove LNG Terminal in the Port of Coos Bay, Oregon.” *Exhibit 23*, p. 1. DOE was aware of Jordan Cove’s

20190705-5199 PERC PDF (Unofficial) 7/5/2019 3:39:50 PM

IND471 continued, page 62 of 75

application to the NEB, noting that “[t]ogether, the two applications request the necessary export and import authorizations for the maximum volume that would be needed at the Project’s maximum expanded capacity—565.75 Bcf/yr of natural gas.” *Id.*, p. 6.

Nor is that all. As documented in the attached reports from Synapse Economics and McCullough Research, Jordan Cove has two compelling reasons to source all of its gas from Canada: Canadian gas is materially cheaper than U.S. gas, and Pembina, Jordan Cove’s parent,²¹ owns extensive natural gas gathering, processing, and transportation infrastructure in Alberta and British Columbia. In fact, as described below, Pembina has trumpeted the Project as a means of utilizing its Canadian resources and exporting Canadian gas.²²

(i) Canadian natural gas is cheaper than U.S. natural gas.

As the Synapse report (*Foreign or Domestic? The source of the natural gas that will be processed at the proposed Jordan Cove LNG facility*, July 2, 2019, attached as *Exhibit 24*) (“*Foreign or Domestic?*”) points out, since 2015 Canadian natural gas (at the AECO and BC-ST 2 hubs) has been consistently cheaper than U.S. Rocky Mountain gas (at the Opal and NWP-Rocky Mountain hubs). *Foreign or Domestic?* Figure 2 (comparing AECO and BC-ST 2 with NWP-Rocky Mountain), and Figure 4 (comparing, *inter alia*, AECO with Opal).²³ Moreover, Canadian gas is expected to remain that way

²¹ “Jordan Cove and Pacific Connector are both subsidiaries of Pembina Pipeline Corporation (Pembina) of Calgary, Alberta, Canada.” DEIS 1-1, n. 1.

²² While Pembina also has an interest in the Ruby pipeline, which could be used to transport U.S. natural gas to the Malin hub, the DEIS erroneously states that, “Ruby is owned by Pembina”. DEIS 1-1, n.5. This is incorrect. Ruby is currently 100% owned by Kinder Morgan, with Pembina holding nothing more than convertible fixed-rate preferred stock: “Pembina Pipeline Corporation owns the remaining interest in Ruby in the form of a convertible preferred interest. If Pembina converted its preferred interest into common interest, Kinder Morgan and Pembina would each own a 50 percent common interest in Ruby.” https://www.kindermorgan.com/business/gas_pipelines/west/Ruby/ (last accessed July 2, 2019).

²³ The Opal hub is where the Ruby pipeline originates. DEIS 3-8. Ruby and the GLN pipeline, which originates at the Kingsgate, BC hub on the Canada-U.S. border (*id.*), meet at the Malin hub. *Id.* at 3-2.

for decades. *Foreign or Domestic?* Figure 4. While Canadian gas made up “only” about 50% of Northwestern U.S. gas consumption, the share of Canadian gas has been increasing steadily since then, and now makes up more than 2/3 of supply in the Northwest, which is actually down from the 75% and 74% levels it reached in 2017 and 2018. *Id.* Figure 3. Worth noting is that Pembina itself has identified cheaper Canadian gas as a factor in its own economic success; its 2018 Annual Report states at least three times that “a wide Chicago-AECO natural gas differential” has benefitted Pembina’s Canadian pipeline and processing operations. *Exc.* 24, pp. 5, 10, 17

Nor does the hub price tell the whole picture. As *Foreign or Domestic?* documents, the tariff transportation costs from the Kingsgate hub on the Canadian-U.S. border to Malin hub are only about 25% of the tariff transportation costs from Opal to the Malin hub, \$0.30 per dekatherm per day v. \$1.19 per dekatherm per day. *Foreign or Domestic?* Tables 1 and 2. Combining the hub and transport prices (*id.*, Table 3), and converting those prices to cubic feet, the total for 1.1 bcf/day (Jordan Cove’s anticipated capacity) is \$2.2 million for Canadian gas v. \$3.2 million for U.S. gas. In other words, for Jordan Cove U.S. gas is about 45% more expensive than Canadian gas. *Id.*, Table 3. Not surprisingly, Synapse concludes that “[w]hen the natural gas hub price and transportation price are taken together, it becomes clear that it is much cheaper for Jordan Cove LNG to obtain natural gas from Canadian suppliers for export overseas.” *Id.*, p. 5.

The attached report from McCullough Research (*Natural Gas Supplies for the Proposed Jordan Cove LNG Terminal*, July 3, 2019, attached at *Exhibit 18*) (“*Natural Gas Supplies*”) confirms that Canadian natural gas will be cheaper for Jordan Cove than U.S. natural gas. While the Pipeline will connect to Malin Hub, that is not where Jordan Cove will be buying gas, since Malin Hub has no forward market. That means that Jordan Cove (or Jordan Cove’s customers)²⁴ will be buying gas

²⁴ Canadian gas will be cheaper regardless of whether the gas is purchased by Jordan Cove, by a Jordan Cove customer in a “tolling” arrangement (where Jordan Cove provides only liquefaction services, and the customer arranges purchase and transportation of the gas to the Facility, and for

directly from a counterparty in an over-the-counter transaction. *Natural Gas Supplies*, p. 7. And logically, that counterparty will be in Canada, as the lower prices at both the APCO and Kingsgate hubs in Canada compared to Opal reflect the lower price of Canadian gas. *Id.* Table 1.

Jordan Cove made some sense when it was first planned as an import facility, because “when Pacific natural gas prices were lower than those in the United States, importing LNG at Coos Bay and selling the natural gas into the lucrative California market made economic sense.” *Natural Gas Supplies*, p. 5. And it even made economic sense when first proposed as an export terminal in 2013, as the 2011 Fukushima nuclear disaster led to closure of Japan’s nuclear power plants and drove Pacific LNG prices (known as the “JKM” price) up to \$19/mmbtu (*id.* p. 6), while at the same time the North American fracking boom drove down U.S. and Canadian prices. This led to proposals for more than 20 North American export terminals. *Id.* p. 6.

But the restarting of the Japanese nuclear fleet and ramped-up LNG exports from other countries has resulted in the JKM price crashing (*id.* p. 6), and for the first six months of 2019, it has averaged \$5.90/mmbtu. *Id.* p. 10. And, according to the Japanese Ministry of the Economy, the average May price for landed LNG was \$5.40/mmbtu. *Exhibit 25*. It is difficult to see how the cost of purchasing and transporting even cheaper Canadian gas, plus liquefaction and transportation costs makes economic sense with a landed price of 5.40/mmbtu. *Natural Gas Supplies*, p. 8. Thus, even with cheap fracked gas, “[a]t today’s JKM price, none of the West Coast LNG export terminals are attractive investments.” *Id.*, p. 7²⁵

(ii) Canadian natural gas will allow Pembina to utilize its existing Canadian infrastructure.

Pembina owns extensive natural gas gathering, processing, and transportation (pipeline

shipping after liquefaction), or some combination (including where Jordan Cove acts as agent for a rolling customer).

²⁵ See also *The Questionable Economics of Jordan Cove LNG Terminal*, McCullough Research (June 2019), attached as *Exhibit 26*.

20190705-5199 PERC PDF (Unofficial) 7/5/2019 3:39:50 PM

infrastructure in Canada, and it makes economic sense for Pembina to take advantage of this in supplying gas to Jordan Cove. As noted in *Natural Gas Supplies*, in June 2019 Pembina's Corporate Update highlighted those assets in connection with Jordan Cove, noting that the "Pembina Store" had "Gathering, Processing, and Field Extraction" (all of which facilities are in Canada), its Alliance Pipeline (which carries Canadian gas into the U.S.), and "Mainline Extraction and Fractionation" at its Younger, Empress and Aux Sable facilities (two of the three in Canada), all upstream of Jordan Cove. Ex. 18, p. 3.²⁶ Pembina's website "About Us" page states:²⁷

Pembina owns an integrated system of pipelines that transports various hydrocarbon liquids and natural gas products produced primarily in western Canada. The Company also owns gas gathering and processing facilities and an oil and natural gas liquids infrastructure and logistics business. Pembina's integrated assets and commercial operations along the majority of the hydrocarbon value chain allow it to offer a full spectrum of midstream and marketing services to the energy sector. Pembina is committed to identifying additional opportunities to connect hydrocarbon production to new demand locations throughout the development of infrastructure that would extend Pembina's service offering even further along the hydrocarbon value chain. These new developments will contribute to ensuring that hydrocarbons produced in the Western Canadian Sedimentary Basin and the other basins where Pembina operates, can reach the highest value markets throughout the world.

Given the substantially lower cost of Canadian gas compared to U.S. gas, the fact that Pembina's natural gas assets and infrastructure are in Canada and will profit from the use of Canadian gas at Jordan Cove, and Jordan Cove's own statements to Canada's National Energy Board and the DOF, it is clear that the gas for Jordan Cove will come from Canada.

V. THE USE OF EMINENT DOMAIN TO BUILD THE PIPELINE VIOLATES THE TAKINGS CLAUSE BECAUSE THERE IS NO PUBLIC BENEFIT IDENTIFIED.

Regardless of the source of the gas being exported, using eminent domain to build the Pipeline violates the Fifth Amendment's Takings Clause, because the DEIS does not identify *any* public benefit beyond purely economic ones – jobs and taxes. In *Kelo v. New London*, 545 U.S. 469

²⁶ Locations of all Pembina assets are from its 2018 Annual Report, attached as *Exhibit 27*.

²⁷ <http://www.pembina.com/about-us/> (last visited July 2, 2019)

IND471 continued, page 65 of 75

IND471-17 Section 7(h) of the Natural Gas Act grants Certificate holders the ability to utilize eminent domain to acquire a right-of-way across private lands. If the Commission issues Pacific Connector a Certificate, it would convey eminent domain authority. The proposed Jordan Cove LNG terminal, which has sought authorization under Section 3 of the NGA, would not have eminent domain authority.

IND471-17

(2005), the Supreme Court held that such economic benefits could justify using eminent domain in the context of a carefully considered plan seeking to comprehensively redevelop an area of New London, those benefits were only one of the goals of the taking. The Court emphasized the need to defer to legislative judgments as to the best means of achieving such complex ends, which specifically included benefits beyond the merely economic:

Those who govern the City were not confronted with the need to remove blight in the Fort Trumbull area, but their determination that the area was sufficiently distressed to justify a program of economic rejuvenation is entitled to our deference. The City has carefully formulated an economic development plan that it believes will provide appreciable benefits to the community, *including—but by no means limited to—new jobs and increased tax revenue*. As with other exercises in urban planning and development, the City is *endeavoring to coordinate a variety of commercial, residential, and recreational uses of land, with the hope that they will form a whole greater than the sum of its parts*. *Id.* at 483; emphasis added, footnote omitted.

In fact, the Court rejected a second time the claim that there would only be economic benefits from the project: “To avoid this result, petitioners urge us to adopt a new bright-line rule that economic development does not qualify as a public use. *Putting aside the unpersuasive suggestion that the City’s plan will provide only purely economic benefits*, neither precedent nor logic supports petitioners’ proposal.” *Id.* at 484 (emphasis added).

In contrast, the Project has no other suggested public benefits aside from the employment and tax issue discussed above. And not only are these economic benefits the only identified public benefits, they are entirely incidental to the purpose of the project, which ostensibly to export Canadian and US gas to Asia. Those incidental economic benefits are not – and cannot be – the purpose of the project, as the Natural Gas Act does not authorize the Commission to grant permission to build LNG export facilities and pipelines for the purpose of creating local tax and employment benefits.

Nor would the Takings Clause allow for eminent domain even if the DEIS identified the export of US natural gas as the purpose of the Project, because there are no identifiable public

IND471-17
cont.

20190705-5199 FERC PDF (Unofficial) 7/5/2019 3:39:50 PM

benefits from such an action beyond additional economic ones, and in such a case economic benefits accruing entirely to private actors acting entirely in their own self-interest. There is not even evidence that the Project would stimulate additional development of U.S. gas production; given that the U.S. could be said to be drowning in natural gas – and will be for years or decades to come—it is not evident how developing additional supplies would benefit anyone at all.²⁸

There can be no way to justify under the Takings Clause the taking of the Landowners' property in order to ship Canadian gas to Asia. Even if the DEIS had identified some additional benefit from the Project related to U.S. natural gas supply, production, distribution, or any other possible public good, there can be absolutely no such benefit from assisting the sale of Canadian natural gas to Asia.

VI. FERC ALLOWING THE TAKING OF PROPERTY UNDER A "CONDITIONED" CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY ("CERTIFICATE") VIOLATES THE FIFTH AMENDMENT.

Conditioned certificates violate the Public Use Clause because there simply cannot be a "public benefit" or "public purpose" to taking property *unless, at a minimum, the project can legally be built*. If any of the other authorizations necessary to build the pipeline are not granted, then the Pipeline will have taken the property of hundreds of landowners for no purpose whatsoever, and courts have refused to allow exercise of eminent domain in similar situations where there was no legal certainty that the project for which property was taken could actually be built.

In the DEIS, FERC lists over 137 conditions with hundreds of 'sub' conditions for granting of the Certificate. DEIS at 5-12 – 5-34. FERC uses various, undefined qualifying language with each condition, including: 'Prior to construction of the final design' (*See, e.g.* 5-23 – 5-30); and 'Prior to construction' (*See, e.g.* 5-17 – 5-18). This language is meaningless, and all of the conditions named throughout the DEIS set the stage for egregious violations of landowners' Fifth Amendment rights.

²⁸ *See* attached Exhibit 28, Summaries of U.S. Natural Gas Supply Demand and Price Forecasts.

IND471 continued, page 67 of 75

IND471-18 Section 7(h) of the Natural Gas Act grants Certificate holders the ability to utilize eminent domain to acquire a right-of-way across private lands. If the Commission issues Pacific Connector a Certificate, it would convey eminent domain authority. The proposed Jordan Cove LNG terminal, which has sought authorization under Section 3 of the NGA, would not have eminent domain authority.

IND471-17
cont.

IND471-18

By allowing eminent domain based on a conditioned certificate, FERC has not only assumed that each of the numerous state and federal agency proceedings will grant the necessary permits, but also that each agency will grant permission to construct the Pipeline exactly where the Certificate authorizes. While FERC (presumably) would agree that it could not presume the outcome of its own administrative process, it apparently has no qualms about presuming the outcome of multiple other state and federal administrative processes. Because the DEIS was issued in March, 2019, it does not acknowledge that on May 6, 2019, the State of Oregon denied Jordan Cove's application for a Clean Water Act section 401 permit, which Jordan Cove *must* have in order to build the Project, on the grounds that the Oregon Department of Environmental Quality "does not have a reasonable assurance that the construction and operation of the Project will comply with applicable Oregon water quality standards." While that denial was "without prejudice", it was the culmination of a year-long administrative process, and FERC certainly now has absolutely no basis for assuming that, even if Jordan Cove chooses to reapply for the 401 permit, that the outcome would be any different.

Finally, even though FERC claims it has the authority to condition construction and operation of the pipeline on obtaining all those other permits, it nevertheless claims that it cannot so condition the exercise of eminent domain. As explained further below (pp. 62-68), this makes no sense, and FERC refuses to even acknowledge that it has *previously done exactly that*, as described in *Mid-Atlantic Express, I.J.C. v. Baltimore County*, 410 Fed. Appx. 653, 657 (4th Cir. 2011). In that case, Environmental Condition 55 of FERC's § 7 Certificate stated that "Mid-Atlantic shall not exercise eminent domain authority granted under [the Natural Gas Act] section 7(h) to acquire permanent rights-of-way on [residential] properties until the required site specific residential construction plans have been reviewed and approved in writing by the Director of [the Office of Energy Projects ("OEP")]. Nor can FERC claim that this was an oversight; when the certificate holder in *Mid-*

IND471-18
cont.

20190705-5199 FERC PDF (Unofficial) 7/5/2019 3:39:50 PM

Atlantic sought clarification of this condition, FERC's rehearing order affirmed that it had this authority. *Order on Rehearing and Clarification and Denying Stay*, 129 FERC ¶ 61,245 at ¶ 24 (Dec. 17, 2009).

Alternatively, just as FERC conditions actual construction of a pipeline on it obtaining all necessary permits, FERC could impose the exact same condition on other "pre-construction" activities on site, such as tree-cutting, cutting drainage channels, or otherwise disturbing vegetation, while allowing access for limited activities such surveying, soil boring, and other environmental assessments.

FERC should recognize the landowners' right to possession until such time as Pacific Connector has obtained all necessary authorizations and can legally proceed with the project. FERC's failure to offer any explanation for its current position is even more damning in light of its previous practice of doing exactly what it now says it has no authority to do.

In sum, if FERC decides to move forward with granting this Certificate with the current DEIS, it will create a situation where hundreds of landowners will lose their property in order to either build a project with only incidental public benefit or, bizarrely, to not build that project at all (or build it in completely different locations), FERC will have repeatedly violated the Takings Clause.

A. Allowing Eminent Domain Based on Conditioned Certificates Violates the Takings Clause by Authorizing Takings that are not Necessarily for a Public Use.

The Supreme Court has long distinguished between laws that authorize government officials to exercise "the sovereign's power of eminent domain on behalf of the sovereign itself" and "statutes which grant to others, such as public utilities, a right to exercise the power of eminent domain on behalf of themselves." *United States v. Carmack*, 329 U.S. 230, 243 n.13 (1946). The first type of law "carries with it the sovereign's full powers except such as are excluded expressly or by implication." *Id.* But the second kind of law is more strictly construed; these laws "do not include

IND471- 18
cont.

IND471-19

IND471 continued, page 69 of 75

IND471-19 Section 7(h) of the Natural Gas Act grants Certificate holders the ability to utilize eminent domain to acquire a right-of-way across private lands. If the Commission issues Pacific Connector a Certificate, it would convey eminent domain authority. The proposed Jordan Cove LNG terminal, which has sought authorization under Section 3 of the NGA, would not have eminent domain authority.

sovereign powers greater than those expressed or necessarily implied." *Id.* Such strict construction is more than justified in dealing with conditioned certificates.

To put this in a familiar context, just imagine a court being asked to order condemnation of land for a project, when the land would not only need to be re-zoned to accommodate the intended use, but the developer has not even applied for the re-zoning.

Even though there will be no "public convenience and necessity" under the Natural Gas Act allowing construction and operation until such time as Pacific Connector obtains all of these other authorizations, there is apparently enough "public benefit" in the mere possibility that the pipeline will be built to satisfy the Takings Clause. Landowners note that the Commission's Policy Statement provides that, "Landowners should not be subject to eminent domain for projects that are not financially viable and therefore may not be viable in the marketplace." 88 FERC ¶ 61,227, p. 20. If landowners should not be subject to eminent domain for projects that are not "financially viable", it makes no sense why they should be subject to eminent domain for projects that are not yet legally viable. If the Project fails to obtain *any* of those necessary permits, FERC will have allowed it to take (and destroy) property for no purpose (and certainly no public benefit) whatsoever, an obvious violation of the Takings Clause.

This is not a theoretical problem. The most dramatic recent example of it came in connection with the Constitution pipeline, when New York State denied the necessary § 401 water quality certification for the project. That decision was then upheld by the Second Circuit in *Constitution Pipeline Co., LLC v. New York State Dep't of Envtl. Conservation*, 868 F.3d 87 (2d. Cir. 2017), *cert. denied* 138 S. Ct. 1697 (2018). Unfortunately, acting on the basis of its conditioned certificate, Constitution had already seized part of the Holleran family property in New Milford, PA, and cut down more than 500 mature trees. Declaration of Catherine Holleran, *Exhibit 29*, ¶ 25. The Constitution pipeline will never be built, but the Holleran family was left with the rotting mess of

IND471-19
cont.

hundreds of dead trees where a thriving forest had once stood.

It gets worse. After failing in its litigation against New York State, Constitution petitioned FERC to declare that New York had waived its right to deny the § 401 certification. Even though FERC denied that petition and the subsequent request for rehearing (*Constitution Pipeline LLC*, 162 FERC ¶61,014 (2018); *rehearing denied*, 164 FERC ¶61,029 (2018)), FERC not only refused to rescind Constitution's Certificate, but has extended its life to December 2020 and is thus continuing to deny the Hollerans enjoyment of their own property. FERC justified this extension on the grounds that Constitution has appealed FERC's denial of its petition to the D.C. Circuit (*Constitution Pipeline v. FERC*, No. 18-1251 (docketed September 14, 2018)), and "there is no reason for the Commission to believe that Constitution . . . will not construct its facilities and place them in service by December 2020, assuming a timely favorable decision from the court." 165 FERC ¶61,081, para. 12 (2018).

Thus, FERC not only allowed Constitution to take the Hollerans' property back in 2015 on the completely unwarranted assumption that all other authorizations would follow, but is now allowing Constitution to hang on to it until at least 2020 on the chance that FERC's own decision will be overturned. The consequences of FERC's cavalier attitude towards other people's property could be avoided simply by not allowing exercise of eminent domain on the basis of a conditioned certificate. And the same fate that befell the Hollerans looms over hundreds of property owners as FERC walks the same steps that it did in Constitution.

The issue of whether eminent domain can be exercised when it is not certain that the intended public benefit will materialize is not new. In *Mayor of Vicksburg v. Thomas*, 645 So. 2d 940 (1994), the Mississippi Supreme Court addressed the situation where the City of Vicksburg condemned the defendant's property in order to convey it to a private corporation for casino development. However, the City's conveyance to the casino company did not specify, in any way, what the company was required to do with the property. Accepting the legislative determination that

IND471-19
cont.

casino development was a “public use”, the Court found that:

the City failed to provide conditions, restrictions, or covenants in its contract with Harrah's to ensure that the property will be used for the purpose of gaming enterprise or other related establishments. In fact, testimony indicates that Harrah's may do anything it wishes with Thomas' property, limited solely by a thirty year reversionary interest in the City.

Id. at 943. This led the court to conclude that, “Because the use of Thomas' land will be at the whim of Harrah's, the private use of Thomas' property by Harrah's will be paramount, not incidental, to the public use and any public benefit from the taking will be speculative at best.” *Id.*

Similarly, in *Casino Reinvestment Development Authority v. Bain*, 320 N.J. Super. 342, 352 (1998), the issue was whether “there are sufficient assurances that the properties to be condemned will be used for the public purposes cited to justify their acquisition.” The Court held that there were, in fact, no assurances of the property being used for the cited public uses, because the developer “is not bound to use these properties for those purposes.” *Id.* at 357.

For pipelines, there simply can be no “reasonable assurances” that each and every other federal and state agency will grant the necessary permissions, or do so such that each particular parcel of condemned land will be necessary for pipeline construction or operation. As a result, there can be no “reasonable assurances” that property condemned under the Natural Gas Act will result in any “public benefit”.

The specific issue of whether a conditioned certificate for a natural gas pipeline can be used to condemn property was recently decided in *Matter of National Fuel Gas Supply Corporation v. Schuckler*, 2018 N.Y. App. Div. LEXIS 7566 (4th Dept. 2018), *appeal docketed* December 7, 2018. The plaintiff in *Schuckler* tried to condemn property even though New York State had denied the required § 401 certification, arguing that while the § 401 certification was a condition precedent to construction of the pipeline, it was not a condition precedent to exercise of eminent domain. The Court dismissed this distinction:

The certificate itself is not the source of petitioner's authority to condemn, and it thus can

IND471-19
cont.

neither authorize nor prohibit the acquisition of property by eminent domain. Rather, the lodestar of petitioner's eminent domain power is the *public project* authorized by the certificate The certificate, in other words, simply authorizes the public project, and the power of eminent domain stands or falls with that project as a necessary ancillary to its implementation (see generally NY Const. art 1, § 7(3)). Thus, when the public project cannot be legally completed, any eminent domain power in connection with that project is necessarily extinguished. To say otherwise would effectively give a condemnor the power to condemn land in the absence of a public project, and that would violate the plain text of the State Constitution.

IND471-19
cont.

Id. at 15. *Schueckler* dealt with a § 401 certification that had been denied, as opposed to one that has not yet been granted, but the legal principle is the same: *unless the project can legally proceed*, there is no public use or benefit that can support the use of eminent domain. As the Ohio Supreme Court noted in *City of Norwood v. Horney*, 110 Ohio St. 3d 353, 383 (Ohio Sup. Ct. 2006): :

A municipality has no authority to appropriate private property for only a contemplated or speculative use in the future. Public use cannot be determined as of the time of completion of a proposed development, but must be defined in terms of present commitments which in the ordinary course of affairs will be fulfilled.

Here, there is no basis for assuming that “in the ordinary course of affairs” Pacific Connector will receive all of the other necessary authorizations for its pipeline.

Respectfully submitted,

/s/ David Bookbinder
David Bookbinder
Chief Counsel
Niskanen Center
820 First Street, NE
Suite 675
Washington, DC 20002

/s/ Megan C. Gibson
Megan C. Gibson
Staff Attorney
Niskanen Center
820 First Street, NE
Suite 675
Washington, DC 20002

/s/ Frank Adams
Frank Adams
Affected Landowner
1731 Ireland Road
Ten Mile, Winston, OR 97496

/s/ Lorraine Spurlock
Lorraine Spurlock
Affected Landowner
1127 Kirkendall Road
Camas Valley, OR 99416

Gerrit Boshuizen
Gerrit Boshuizen
Affected Landowner
18191 Highway 39
Klamath Falls, OR 97603

/s/ Toni Woolsey
Toni Woolsey
Affected Landowner
213 Ragsdale Road
Trail, OR 97541

/s/ Stepbay Adams
Stephany Adams
Affected Landowner
2039 Ireland Road
Winston, OR 97496

/s/ Bill Gow
Bill and Sharon Gow
Affected Landowner
4993 Clark Branch Road
Roseburg, OR 97470

/s/ Wilfred E. Brown
Wilfred E. Brown
Affected Landowner
Parcel #: R10266; R11298; R11338
Douglas County

/s/ Barbara L. Brown
Barbara L. Brown
Affected Landowner
Parcel #: R10266; R11298; R11338
Douglas County

/s/ Richard Brown
Richard Brown
Affected Landowner
2381 Upper Camas Road
Camas Valley, OR 97416

/s/ Cornelis Boshuizen
Cornelis Boshuizen
Affected Landowner
18191 Highway 39
Klamath Falls, OR 97603

/s/ Clarence Adams
Clarence Adams
Affected Landowner
2039 Ireland Road
Winston, OR 97496

/s/ John Clarke
John and Robert Clarke
Affected Landowner
1102 and 1363 Twin Oaks Lane
Winston, OR 97496

/s/ Pamela Brown Ordway
Pamela Brown Ordway
Affected Landowner
Parcel #: R10266; R11298; R11338
Douglas County

/s/ Elizabeth A. Hyde
Elizabeth A. Hyde
Affected Landowner
Parcel #: R10266; R11298; R11338
Douglas County

/s/ Chet N. Brown
Chet N. Brown
Affected Landowner
Parcel #: R10266; R11298; R11338
Douglas County

/s/ Twyla Brown
Twyla Brown
Affected Landowner
2381 Upper Camas Road
Camas Valley, OR 97416

/s/ Deb Evans
Deb Evans
Affected Landowner
9786 Highway 66
Ashland, OR 97520

/s/ Stacy McLaughlin
Stacey and Craig McLaughlin
Affected Landowner
727 Glory Lane
Myrtle Creek, OR 97457

/s/ Wendy McKinley
Wendy McKinley
Affected Landowner
45 Hickory Avenue
Corte Madera, CA 94925

/s/ Ron Schaaf
Ron Schaaf
Affected Landowner
9786 Highway 66
Ashland, OR 97520

/s/ Alisa Acosta, as Trustee of Acosta Living Trust
Alisa Acosta, as Trustee of Acosta Living Trust
Affected Landowner
536 Ragsdale Road
Trail, OR 97541

/s/ Will McKinley
Will McKinley
Affected Landowner
45 Hickory Avenue
Corte Madera, CA 94925

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

Janet Hodder Ph.D.
63840 Fossil Point Road
Coos Bay OR 97420

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

June 27, 2019

RE: Jordan Cove Energy and Pacific Connector Gas Pipeline Project (CP17-494-000 and CP17-495-000)
Draft Environmental Impact Statement (DEIS)

Dear Secretary Bose and members of the FERC Commission:

I strongly oppose the Jordan Cove Liquefied Natural Gas (LNG) and Pacific Connector Pipeline project (CP17-494-000 and CP17-495-000). FERC should not issue Authorization and Certificate of Public Convenience and Necessity because the adverse environmental, public safety, and other impacts of these projects demonstrate that the projects are contrary to the public interest. IND556-1

In 2016, the Commission denied Jordan Cove Energy Project's (JCEP) application for a Section 7 Certificate of Public Convenience and Necessity for the pipeline because the applicant had failed to demonstrate adequate purpose and need for the project when weighed against the adverse consequences on private landowners. The denial stopped any consideration of the proposed LNG terminal as it was useless without a gas pipeline. Very little has substantially changed in the current application since that denial. Many of the landowners on the pipeline route have not granted permission to JCEP, Pembina has not announced any binding agreements to purchase gas, the environmental, safety and social implications of the project have not changed substantially, and JCEP has still failed to demonstrate that there is adequate "need" for this project. IND556-2

The National Environmental Policy Act (NEPA) requires a draft EIS to include a statement of the underlying purpose and need of the project. The purpose and need statement explains to the reader why FERC's action is necessary, and serves as the basis for identifying the reasonable alternatives that meet the purpose and need. Jordan Cove states the purpose of its project is to:

1. export natural gas supplies derived from existing interstate natural gas transmission systems (linked to the Rocky Mountain region and Western Canada) to overseas markets, particularly Asia.
2. connect the existing interstate natural gas transmission systems of GTN and Ruby with the proposed Jordan Cove LNG terminal.

FERC is required to evaluate reasonable alternatives including those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. FERC's argument that they can only consider alternatives which involve pipeline systems that interconnect near Malin, Oregon does not meet this standard. By placing such a IND556-3

IND556 Janet Hodder, PhD, page 1 of 19

IND556-1 Nowhere in the draft EIS is there a statement that the Project would be in the "public interest." In fact, the Commission would make its finding of public benefit in its decision-document Project Order. The EIS is not a decision-document. The Commission would issue its Order after we have produced a final EIS.

IND556-2 As described in section 1 of the EIS, the FERC staff and this EIS do not make a determination regarding the Project's need. The decision regarding the Project's need, is made by the Commission within the Project's Order. The Commission developed a "Certificate Policy Statement" (see Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227 (1999), clarified in 90 FERC ¶ 61,128, and further clarified in 92 ¶ 61,094 (2000)), that established criteria for determining whether there is a need for a proposed project. Note that the Commission would consider as part of its decision whether or not to authorize natural gas facilities, all factors bearing on the public interest, including the Project's purpose and need.

IND556-3 Comment noted. See response to comments CO26-12 and CO26-21.

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

strict requirement on any alternatives FERC has essentially prevented any assessment of other ways in which Jordan Cove could access Canada and Colorado's gas reserves and export it to Asia.

IND556-3
cont.

Overall the DEIS fails to support its conclusions that the projects would have limited adverse environmental, social and safety impacts. The DEIS identifies an alarming number of impacts expected from this project, and it inevitably concludes that either the impact will be negligible or short-term. This disconnect between information provided and conclusions drawn is rampant throughout the DEIS. After presenting pages of discussion of negative impacts on some topic expected to be exerted by project construction and operations, the DEIS makes its standard conclusion that the impact will be negligible or short-term. One such example of this disconnect is the conclusion of the WILDLIFE AND AQUATIC RESOURCES section of the DEIS.

IND556-4

DEIS Section 4.5.2.5 states: *"Constructing and operating the Project would have both short-term effects on fish and invertebrate individuals as well as short- and long-term effects on aquatic habitat. Individual fish and shellfish as well as their food sources would be directly lost as a result of Project construction, the initial and maintenance dredging, decreased water quality, and entrainment from vessel water intake. Habitat modifications would also reduce local important habitat areas including rearing, spawning, and cover areas (e.g., aquatic vegetation, eelgrass). Short-term effects from the pipeline would also include direct local reduction in food sources primarily from bottom disturbance resulting from stream crossings and short-term elevated turbidity; elevated turbidity would also cause short-term sublethal stress to fish and invertebrate stream organisms and movement blockages over limited specific stream locations and time, while limited reduction of riparian vegetation and trees would have limited short- and long-term reduction in stream habitat components. However, the distribution of adverse effects would be limited to areas near the Project (e.g., at the LNG facilities and near and downstream of pipeline stream crossings), and BMPs and impact avoidance measures implemented during construction as well as mitigative actions implemented following construction would limit long-term adverse effects. As a result, we conclude that the Project would not significantly affect fish and aquatic invertebrates."*

Although the DEIS concludes that the Project would not significantly affect fish and aquatic invertebrates, the text in the quote above points out numerous examples where that is not the case. One such example of many that I could cite is the impact of the proposed sediment transport pipeline that will serve the dredge spoils from the navigation area and eelgrass mitigation area dredging. It traverses a large segment of the estuary that is zoned as natural aquatic in the Coos Bay Estuary Management plan and has substantial wildlife use during the in-window months of dredging operation including, but not limited to, important waterfowl areas, harbor seal haul-outs and pupping sites, herring spawning sites, eelgrass beds, winter spawning and larval settlement regions for benthic and pelagic invertebrates, and habitats important for fish feeding. The initial dredging, and the ~ 8 mile dredge line that will transport the spoils to the APCO site, will be in place for three years, and then every three to five years after that for maintenance dredging. This will certainly have long-term impacts on the important habitat areas Coos Bay.

Another example in the DEIS of this disconnect is the impacts of the project on water quality including turbidity, sedimentation, water temperature, drinking water resources, channel and streambank stability. These impacts are noted to only be short term and localized. However, the Oregon Department of Environmental Quality (ODEQ) disagrees. The information in DEIS Table 1.5.1-1 regarding the Water Quality Certification Section 401 permit from ODEQ is incorrect. ODEQ has denied JCEP's 401 Water Quality application. They found that the project would not comply with Oregon Water

IND556 continued, page 2 of 19

IND556-4 We disagree that the analysis in the EIS does not support our conclusions. As indicated in this comment, the EIS does identify multiple places where impacts would be long-term or permanent, but not all long-term or permanent impacts would rise to the level of "significance" as defined by NEPA. The EIS does identify multiple impacts that would rise to the level of "significance" as defined by NEPA, which the commenter has not mentioned (e.g., housing availability, visual, etc..).

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

IND556 continued, page 3 of 19

Quality Standards and, in certain aspects, applicable Total Maximum Daily Loads (TMDLs). A summary of their findings is presented below.

- JCEP did not provide evidence that it would use the best controls for preventing dredged materials from entering the waterways, minimizing turbidity, and pollution, and keeping inorganic and organic materials out of public waters.
- JCEP did not demonstrate that it would use the best methods to prevent waste materials from construction of the pipeline, access roads, and water crossings from entering public waters or identify and mitigate landslide risk which would put organic and inorganic materials into waters.
- Stormwater management at the LNG terminal would cause increased turbidity and changes in hydrology in wetlands affecting the resident biological communities.
- Placement of marine sediments upland would be in violation of biocriteria, OAR 340-041-0011.
- No assurance that the project will not violate the dissolved oxygen water quality standard at OAR 340-41-0016.
- There is no assurance that the project will not violate the pH water quality standard at OAR 340-41-0021.
- JCEP has not demonstrated that construction of the pipeline and related activities would avoid disturbance of habitat and biological communities, prevent landslides.
- The pipeline and associated work areas and roadways are likely to violate Oregon's water quality standard for temperature.
- There is no reasonable assurance that the proposed activities would be conducted in a manner that would not violate the Toxic Substances water quality standard. OAR 340-041-0033, OAR 340-048-0020(3).
- JCEP's proposed activities do not employ the highest and best treatment to control turbid discharges and would likely violate the Turbidity water quality standard OAR 340-041-0036.
- JCEP considered methods to avoid and minimize water quality impacts to temperature, turbidity, sedimentation, and biocriteria, DEQ finds the project does not meet the requirements of DEQ's antidegradation policy.

These findings call into serious question the statements made in the DEIS that the Project's harm to the Coos Bay estuary, rivers, streams, wetlands, and public water supplies would not be significant.

To assist FERC with assessing additional substantial comments I have organized them into sections that focus on a specific chapter of the DEIS or a specific topic of concern. They are:

- Comments on the effects of Jordan Cove Energy Project (JCEP) on the operations of the Southwest Oregon airport (page 3)
- Comments on the adequacy of the socioeconomic analysis (page 5)
- Comments on the adequacy of the eelgrass mitigation and Kentuck wetland mitigation plans (page 8)
- Comments concerned with safety submitted at the FERC hearing in Coos Bay on June 24 (page 15).

INADEQUACIES IN THE DEIS ASSOCIATED WITH THE SOUTHWEST OREGON REGIONAL AIRPORT

The Southwest Oregon Regional Airport (also known by United Airlines as North Bend airport) is a crucial facility for those of us who work in Coos County and, even more importantly, those coming to golf at the Bandon Dunes golf courses. A recent article in the Coos Bay World newspaper highlights this

IND556-5

IND556-5 Section 4.10.1.4 has been updated to note that there are currently daily flights from the Southwest Oregon Regional Airport to San Francisco.

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

importance and outlines expansion plans for the sixth golf course to be opened in 2020: https://theworldlink.com/community/bandon/news/bandon-dunes-has-had-strong-economic-impact-to-area/article_29c18271-243c-5006-a081-44cd9ad36f50.html As a frequent user of the United flights to and from San Francisco it is normal to see over three quarters of the plane filled with golfers.

As an FYI the DEIS, *Commercial passenger service to and from the airport is currently provided by United Airlines, with one flight daily to and from San Francisco, four days a week.* This information is out of date. We currently have daily service to San Francisco; likely the result of additional golfers.

The economic impact of the Bandon Dunes golf resort, our reputation as a premier golf destination, and our ability to travel easily by air could be seriously affected by JCEP activities. JCEP's lack of attention to the need to gain FAA approval for their project does not provide assurance that that United Airlines will not use this as an excuse to abandon the North Bend airport or that we will be able to attract other carriers and routes. It is of vital importance that our airport is not seen as being compromised. The DEIS does not provide assurances that this will be the case. In section 4.10.1.4 Air Traffic the EIS states, "During operation of the Jordan Cove LNG Project, LNG carriers in the Federal Navigation Channel would cross the airport approach pathway. Jordan Cove has indicated that aircraft would be delayed by about 13 minutes for each passing vessel, consisting of a 10-minute advance notice period, and 3 minutes of actual time during which airspace would be potentially obstructed. LNG carrier transit times could also be adjusted to avoid conflict with air traffic, if the need arises."

Additionally the statement in the DEIS: "Permanent and temporary structures at the LNG terminal as well as LNG carrier operations in the Federal Navigation Channel would exceed FAA obstruction standards and there is a potential significant impact to the safe air operations of the Southwest Oregon Regional Airport if a resolution cannot be settled between Jordan Cove and FAA." FERC should ask why JCEP has not dealt with this issue. This issue was identified in the 2015 EIS and should not have been a surprise to Pembina. It is totally irresponsible and unacceptable that this information is not available and included in the DEIS.

The DEIS statement regarding the impact of thermal plumes emanating from the LNG terminal on airplanes is inadequate. The DEIS says the LNG terminal would not generate thermal plumes as the South Dunes Power is no longer part of the proposed terminal site. (DEIS page 4-646). This is difficult to understand and needs further explanation. 1.2 billion cubic feet/day of gas at ambient temperature will be delivered to the terminal and refrigerated to -230 °F. The heat generated by that temperature change has to go somewhere. Additionally the heat produced by the three 30 megawatt gas fired steam turbines also has to go somewhere. There will also be predictable flaring during start up and shut down operations and unpredictable flaring should there need to be an unanticipated shut down of the terminal. Thermal plumes are inevitable from all of these actions.

The DEIS fails to include any analysis of the risk of an aircraft impact to an LNG tanker on route to and in the terminal slip. Thus the conclusion that the project would not pose a significant risk or increase risk to the public from aircraft impacts is incomplete.

In the Cumulative Impacts section of the DEIS FERC acknowledges the impact of work at the North Bend airport, "Coos County Airport District — Southwest Oregon Regional Airport Expansion 0.1 mile northeast of eel grass mitigation site, 0.7 mile southeast of LNG terminal and that the impacts are: Water Resources and Wetlands, Wildlife and Aquatic Resources, Soil (shoreline erosion, sedimentation), Air Quality and Noise (construction)." Additional work however is planned for the airport. US representative Peter DeFazio recently announced two funded projects:

IND556-5
cont.

IND556-6

IND556-7

IND556-8

IND556-9

IND556 continued, page 4 of 19

IND556-6 See our updated analysis in section 4.10 and 4.13 of the final EIS related to the FAA assessment, and the Project's potential impacts to the Southwest Regional Airport.

IND556-7 The discussion of thermal plumes in section 4.10.1.4 of the EIS has been expanded to provide more information about the potential impacts from thermal plumes based on the current Project configuration.

Potential impacts to the safe air operations of the Southwest Oregon Regional Airport are discussed further in section 4.13.1.5 of the EIS.

IND556-8 Section 4.13.1.3 of the final EIS discusses the potential impacts within the Zones of Concern that are based on accidental and intentional acts for LNG marine vessels within the transit route and at the proposed marine slip. Section 4.13.1.5 of the final EIS (Air) summarizes FERC staff's review of nearby aircraft operations as well as USDOT FAA's findings for the LNG marine vessel and other tall structures at the proposed site. In addition, FERC staff recommend Jordan Cove receive a Determination of No Hazard to Air Navigation for permanent and temporary tall structures and for LNG marine vessel operations within Coos Bay prior to initial site preparation.

IND556-9 The impacts of these projects when combined with the impacts of the Project and other present and reasonably foreseeable projects would not substantially increase the significant cumulative impact on the visual character of Coos Bay nor would they result in significant cumulative impacts on other resources.

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

1. The Southwest Oregon Regional Airport in North Bend will receive \$3.7 million to install a runway vertical and visual guidance system as well as miscellaneous navigational aids and airfield guidance signs. In addition, the funds will go towards rehabilitating runway lighting at the airport, making arrivals and departures from the airport safer. See: <https://defazio.house.gov/media-center/press-releases/rep-peter-defazio-secures-38-million-in-funding-for-airport-improvements>

2. More than \$760,000 will fund improvements to airfield lighting systems and an environmental study evaluating any potential environmental impacts of runway safety improvements at the Southwest Oregon Regional Airport in North Bend. <https://defazio.house.gov/media-center/press-releases/rep-peter-defazio-announces-more-than-11-million-in-grants-for-airport>

These two projects cannot be jeopardized by the actions of the JCEP.

INADEQUACIES IN THE DEIS RELATED TO THE SOCIOECONOMICS SECTION

The section on socioeconomics in the DEIS does not fully capture and analyze many of the social and economic issues of the Jordan Cove Energy Project (JCEP), especially those related to activities in Coos Bay. They include:

1. Impacts of the transient workforce
2. Impacts of JCEP's activities on property values
3. Impacts of JCEP's activities on recreation and tourism
4. The analysis of Other Commercial Activities - Commercial Fishing
5. The analysis of Environmental Justice impacts to the Coos Bay, North Bend and Charleston communities

1. IMPACTS OF THE TRANSIENT WORKFORCE

Although the DEIS outlines potential impacts associated with the transient workforce estimated to be present in Coos County during the JCEP construction period it fails to fully capture and analyze many of the issues of how this workforce will impact Coos Bay, North Bend and the Charleston communities. They include but are not limited to:

a. The DEIS evaluation of the adverse impact of the temporary laborer camps fails to adequately include and analyze the evidence of impacts to women, children, low income populations, and Native Americans.

The DES acknowledges that the majority of workers for the terminal and pipeline will be those that have, "gained experience in other related industries, including the oil and gas and power industries" and will already have the skills that Jordan Cove requires, and that, "very few, if any, of the temporary construction workers relocating to the Project area are expected to stay permanently." Thus few will be local residents and will not be invested in the local community. But it will be the local community that will bear the brunt of the influx and examples from other communities that have experience this "boom and bust" cycle of itinerant employment do not provide confidence that the experience will be all positive. The DEIS does not adequately analyze the potential increase in crime rates, drug use, domestic violence, sex trafficking, and increases in HIV and sexually transmitted infections. Page 96 – 101 of *Fracked Gas Infrastructure: A Threat To Healthy Communities - A Special Report and Recommendations to the Governors of Oregon and Washington by Oregon Physicians for Social Responsibility and*

5

IND556 continued, page 5 of 19

IND556-10 The cited report (PSR 2019) provides a summary of studies and articles primarily related to large-scale oil-field development, such as the Bakken oil fields of North Dakota, that highlight increases in crime rates, HIV and sexually transmitted infections, and traffic accidents, increased demand for health care, increases in uninsured patients, and concerns related to sex trafficking. The report also notes that evidence is emerging that suggests that tribal communities near temporary labor camps are particularly affected.

Potential increases in crime are addressed in section 4.9.1.1 of the EIS. As discussed in this section, some studies and articles have identified increases in crime related to large influxes of temporary workers. Other studies found inconclusive links between crime and increased oil and gas activity or only minor increases in crime. Studies have also concluded that impacts depend on a range of variables, with different oil field counties experiencing different levels and types of crime-related impacts. As a result, attempts to use this information to estimate related potential increases in crime from the Project would be speculative, as noted in the EIS.

Local and federal law enforcement agencies are responsible for enforcing laws. Potential impacts to public services including law enforcement are assessed in sections 4.9.1.6 (LNG Terminal) and 4.9.2.6 (Pipeline). As discussed in section 4.9.1.6, Jordan Cove would reimburse Coos County to cover any costs associated with public safety during construction and operation. Jordan Cove has also committed to building and funding the SORSC within the Jordan Cove LNG Project site.

During construction, Jordan Cove would provide on-site medical facilities and personnel to provide care for the project workforce both at the site and at the Workforce Housing Facility. During plant operation, Jordan Cove would have a licensed nurse practitioner on staff with offices located in the Operations Building. Additionally, to address public concern, Jordan Cove signed an MOU with the State of Oregon that requires it to equip the Bay Area Hospital according to State policies for all hospitals in treating burns. Impacts to medical services are discussed further in sections 4.9.1.6 and 4.9.2.6 of the EIS.

Washington Physicians for Social Responsibility (June 2019) outlines aspects of these impacts that should be considered by FERC.

IND556-10
cont.

b. The DEIS evaluation of impact of the transient workforce on local services is inadequate

IND556-11

The DEIS analysis of the impact on local medical facilities does not take into account the current lack of medical providers at the North Bend Medical Center and the Bay Clinic. Current residents who lose their access to a doctor as a result of his or her retirement or relocation commonly wait several months to be assigned a new provider. The additional need for medical services will only aggravate this fact. Neither does the DEIS analyze the need for additional social services that may be needed to respond to additional cases of domestic violence, sex crimes, and the mental health impacts resulting from the uncertainty of risks from the JCEP operations to health, life, property, and sense of well-being that some residents will experience.

c. The DEIS evaluation of impact of the transient workforce on housing is inadequate

IND556-12

The DEIS makes it clear that Coos Bay/North Bend has very little available housing for rent but uses the data from the 5-year estimates (2011 to 2015) provided by the U.S. Census American Community Survey. Much has changed in the Coos Bay rental market since that time. Calls made to rental property agencies in Coos Bay indicate that currently there is only approximately 1% of the rental properties vacant. An influx of JCEP workers will likely cause severe competition for these units, drive up rents, and displace local residents.

2. IMPACTS OF JCEP'S ACTIVITIES ON PROPERTY VALUES

a. The DEIS evaluation of JCEP's activities impact on property values is inadequate

IND556-13

The analysis of property values by ECONorthwest within 1 mile of existing LNG "peak storage" facilities in Newport and Portland, Oregon is irrelevant for the purposes of assessing changes in property values as a result of JCEP's activities and should be edited from the DEIS. These peak storage facilities are not comparable to a LNG export terminal in ways too numerous to mention. Safety aspects alone from LNG export terminal operations and LNG ships transits will have much more of an impact on people's perceptions of living in the so called "Zones of Concern" (included as a graphic in my comments on safety below) that was included in the 2015 DEIS but appear to have been omitted in the current document. The 2019 DEIS should address his issue.

3. IMPACTS TO RECREATION AND TOURISM

a. The DEIS section 4.9.1.7 Recreation and Tourism is inadequate.

IND556-14

This section of the DEIS focuses purely on competition by workers with visitors for accommodations. There are a huge number of other impacts to recreation and tourism in Coos Bay that should be included in this section of the DEIS. There is no mention of how surfing, kayaking, scuba diving, recreational fishing or crabbing vessels will be impacted because of the security and safety zones or other conditions imposed by the Coast Guard. There are no estimates on the effects of the LNG terminal or the LNG tanker safety/security zone restriction on the public's perception of Coos Bay as a desirable site for these activities (see below for issues on safe bar passage for example). Will visitors choose to go elsewhere to recreate? The New Carissa Recreational Loss Pre-Assessment Report (Carlson 2001) estimated that at least 100 to 700 fishing and crabbing trips were lost due to the two month

IND556 continued, page 6 of 19

IND556-11 Many non-local workers temporarily relocating to the area may continue to access their own Primary Care Physicians for preventative care, especially those workers who would be employed for shorter periods. Further, as discussed in section 4.9.1.6, during construction, Jordan Cove would provide on-site medical facilities and personnel to provide care for the project workforce both at the site and at the Workforce Housing Facility. Additionally, to address public concern, Jordan Cove signed an MOU with the State of Oregon that requires it to equip the Bay Area Hospital according to State policies for all hospitals in treating burns.

IND556-12 The housing analysis in the EIS found that construction of the Project has the potential to cause significant effects to short-term housing in Coos County. The ACS estimates used in the draft EIS were the most current available at the time of preparation. These data have been updated for the final EIS. The latest 5-year estimates are for 2013 to 2017. These data indicate a tightening of the rental housing market, with the estimated rental housing vacancy rate dropping from 6.7 percent (2011 to 2015) to 5.6 percent (2013 to 2017). As noted in the comment, increased demand from construction workers could result in increased rents and the potential displacement of local residents (see section 4.9.2.2). We address this issue in the final EIS by recommending that Jordan Cove and Pacific Connector designate a Construction Housing Coordinator to address construction contractor housing needs and potential impacts in the four affected counties.

IND556-13 The peak storage facilities evaluated by ECONorthwest (2006) are not export terminals and, therefore, are not the same as the proposed LNG terminal. However, we are not aware of any studies that specifically address the impact of LNG export terminals on property values and, therefore, section 4.9.1.3 reviews studies that assess similar facilities. Zones of concern are addressed in section 4.13 of the EIS.

IND556-14 The section cited in this comment (section 4.9.1.7) focuses on potential recreation and tourism-related economic impacts. Impacts to recreation and tourism are assessed in detail in section 4.8 of the EIS. The presence of 120 LNG carriers per year (an average of 2.3 vessels per week) is not expected to affect the public's perception of Coos Bay as a potential site for recreation activities.

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

fishing and crabbing advisories that resulted from the grounding of the New Carissa chip ship outside of Coos Bay.

IND556-14
cont

4. IMPACTS TO COMMERCIAL FISHING

a. The DEIS section 4.9.1.8 other commercial activities - commercial fishing is inadequate.

IND556-15

It is apparent from the text on Page 4-598 that the author of the DEIS or anyone associated with JCEP has never commercially fished out of Coos Bay. The statement that, "There may be slight delays resulting from meeting situations between an LNG carrier and a commercial fishing vessel, because of the security and safety zones or other conditions imposed by the Coast Guard. Jordan Cove has indicated that the impact on boats at any point in the channel would last about 20 to 30 minutes, the same as when other deepdraft vessels use the channel." has no basis in reality. The impact of the current wood chip ships which are the largest vessels transiting Coos Bay does not impact commercial fishing boats as they do not require a security and safety zone during transit because their cargo is not considered a security risk. Both types of vessels can transit the Coos Bay bar with no restriction. However the 500 ft safety/security zone restriction associated with LNG tankers will have a serious impact on commercial fishermen as the entire area between the north and south jetties of Coos Bay will be closed to other vessel movement when a LNG tanker is crossing the bar. This would require them to wait outside of the bar until it is open for passage thus endangering their operations.

The safest time to cross the Coos Bay bar in a boat is around high tide when currents and waves are lessened. This is also the time of transit for the LNG tankers as they need the under-keel clearance that the high tides offer to safely navigate to the terminal. Coos Bay experiences a semi-diurnal tide regime meaning that there are two high tides every 24 hours and 50 minutes. There is a difference in the height of these high tides, one being higher than the other. Due to the depth of the Federal navigation channel it is likely that LNG vessel transit will occur on the higher of the high tides. Jordan Cove has stated in their Department of State Lands fill and removal permit application that it favors transits on night high tides. A search of the 2018 Coos Bay tide tables provides information about the number of nighttime higher high tides. It shows that these vary considerably during the year due to the tidal regime. On some months there are very few higher high tides at night. For example in January, there are nine days, in February twelve, September fifteen, November four and December seven. Other months have more, for example April has twenty-two and June twenty-seven. Thus there will need to be LNG tanker transits on the day time high tides in many months of the year, a time when commercial and recreational vessels also favor crossing the bar. Commercial fishing vessels however, also make night-time bar transits, especially during the winter crabbing season, so Jordan Cove's night time bar crossing plans for LNG will not prevent restrictions to the Charleston fishing fleet. The safety aspects for both recreational and commercial fishers, and the subsequent economic impact from the loss of fishing opportunity have not been adequately considered in the DEIS.

5. ENVIRONMENTAL JUSTICE

a. The analysis of Environmental Justice impacts to the Coos Bay, North Bend and Charleston communities is inadequate.

IND556-16

The population of Coos Bay is 9.04% Hispanic or Latino, and that of North Bend is 9.73% Hispanic or Latino. An unknown, but likely substantial, percentage of the Hispanic and Latino work force is found in industries that will be impacted by the JCEP's activities. They include those employed in the oyster farming and fishing industries and those that work in forestry and agriculture. FERC's guidelines

IND556 continued, page 7 of 19

IND556-15 Section 4.9.1.8 has also been revised to provide more details regarding the Coast Guard safety and security zone for LNG vessels. Non-LNG vessels would be allowed to transit through the safety zone and would also be allowed in the safety zone during passage, provided that these other vessels do not impede the safe navigation of the LNG carriers in the restricted channel, and that the other vessels do not pose a security threat or concern to the LNG carriers in transit. As noted in section 4.9.1.8 of the EIS, the estimated impact on other vessels at any point in the channel would last about 20 to 30 minutes, the same as when other deep-draft vessels use the channel.

IND556-16 As noted in the comment, according to the latest 5-year estimates (2013 to 2017) from the U.S. Census Bureau's American Community Survey (ACS), an estimated 9.0 percent and 9.7 percent of the populations of the cities of Coos Bay and North Bend are Hispanic or Latino. This is higher than the county average (6.3 percent), but below the state average (12.7 percent) (U.S. Census Bureau 2019c). Hispanic and Latino populations are considered minority populations and are included in the total minority populations summarized in table 4.9.1.9-1 of the draft EIS. Data were also reviewed for the Census tracts within 3 miles of the proposed LNG terminal site. Based on the ACS data used by the EPA's EJSCREEN tool, the share of the population identified as linguistically isolated was below the state average in almost all of the areas reviewed (see section 4.9.1.9 of the EIS). Public involvement activities conducted in support of the Project are discussed in section 1.4 of the EIS.

The draft EIS did not identify significant impacts to the commercial fishing, timber, or agricultural sectors and, therefore, Hispanic or Latino and other workers employed in these industries are not expected to be significantly affected by the Project.

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

on environmental justice say that communities with limited English proficiency should be addressed due to their unique vulnerabilities. There is no evidence in the DEIS that the impact to Hispanic or Latino communities of Coos County have been considered.

IND556-16
cont.

INADEQUACIES IN THE DEIS RELATED TO JORDAN COVE ENERGY PROJECT'S (JCEP) WETLAND MITIGATION PLANS

Two major wetland mitigation actions are planned by the Jordan Cove Energy Project (JCEP). They are an eelgrass mitigation project and a project to mitigate for additional wetland impacts associated with the LNG terminal and gas pipeline to be based at Kentuck. Both plans are included in the Compensatory Wetland Mitigation plan which is referenced, but not included, in the DEIS. Both plans are inadequate and should be assessed in the FERC DEIS.

1. MITIGATION FOR EELGRASS HABITAT DESTRUCTION

JCEP's eelgrass mitigation plan is inadequate. NMFS has designated eelgrass essential fish habitat (EFH) and it is not sufficient in the EIS to include the text in DEIS page 4-129 shown below without an analysis of the impact to this EFH and ESA-listed species, including anadromous fishes, eulachon, and others.

IND556-17

Text from DEIS page 4-129: *Dredging for construction of the Eelgrass Mitigation site could result in approximately 10.3 acres of temporary short-term impacts; potential impacts include a temporary reduction in water quality due to an increase in sedimentation during dredging activities and a temporary loss of benthic organisms. Benthic organisms could re-establish within the area once eelgrass revegetation was complete (see section 4.5 of this EIS).*

Below I outline other inadequacies of the proposed eelgrass mitigation. I conclude that impacts will not be short-term, the loss of benthic organisms will be permanent and will not reestablish once eelgrass restoration is complete. The DEIS provides no evidence to support the statements included in the text from DEIS page 4-129 noted above and these issues should be addressed before a permit is approved.

a. Destruction of a functioning part of the estuary to build eelgrass bed

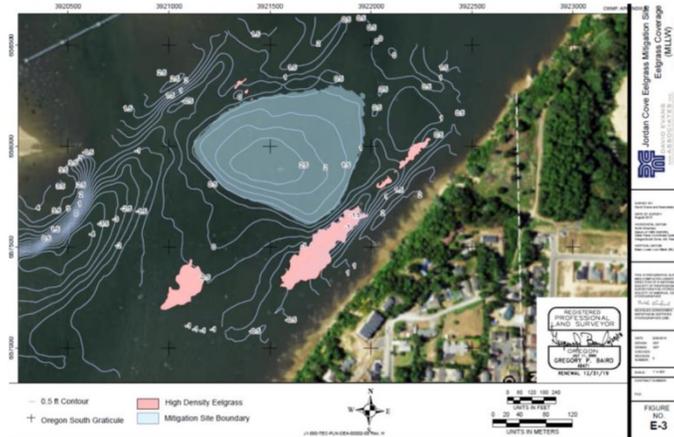
Removal of 46,535 cubic yards of sediment from the wetland surface of the eelgrass mitigation area will result on the complete removal of any epibenthic biota and infauna from this area. This is not a short-term impact.

b. Design and placement of the eelgrass mitigation

The area chosen for the eelgrass mitigation will be dredged to lower it to an elevation suitable for eelgrass establishment. This action will create a "sump" - essentially a deeper hole surrounded by a higher elevation plain. See Figure E-3 from JCEP's Compensatory Wetland Mitigation Plan below.

IND556 continued, page 8 of 19

IND556-17 We acknowledge the dredging of the access channel would convert shallow to deep water habitat. The applicant has proposed mitigation for these in the form of the Kentuck wetland mitigation project (i.e., slough restoration and development) and the eelgrass mitigation site (see the Compensatory Wetland Mitigation Plan). Both would produce more habitat of similar type than would be lost and we retain our evaluation as stated in section 4.5. The details of the specific plans would need to be approved by state through their permitting process independent of the FERC evaluation process. The permitting agencies can deny or place requirements on the plans as deemed necessary to meet their mandated permit requirements. The Commission requires that all federally designed permits be obtained prior to project construction commencements.



This has serious implications for the functioning of the estuary. At tide levels lower than 0 foot NAVD08, the excavated eelgrass mitigation area will hold water in a shallow intertidal pond formed by the dredging. Juvenile fish, including salmon smolts and eulachon, are attracted to eelgrass habitats, hence the plant's designation as EFH. Constructing an eelgrass mitigation area as proposed by JCEP will result in the creation of an eelgrass bed that is attractive to fish. Fish seeking low tide refuge in shallow intertidal ponded water areas are particularly vulnerable to predation by piscivorous birds and mammalian mesopredators.

On sunny low tide days, when the tide level leaves water in the excavated area, the remaining water will warm and have a reduced oxygen content. Many studies have shown that low oxygen and high temperatures have negative impacts on eelgrass photosynthesis and growth. These negative impacts are most notable with increasing temperature e.g. Pulido and Borum (2010), Raun and Borum (2013). Recent studies in the South Slough National Estuarine Research Reserve, located in Coos Bay south of the Jordan Cove project area, have shown that a small elevation in temperature over a short period, has resulted in a serious decline in eelgrass cover. These implications suggest that the eelgrass mitigation is unlikely to be successful.

c. Issues associated with the placement of the dredge pipe and booster pump to excavate the eelgrass mitigation site.

The temporary dredge lines to be used to move sediment from the site will be elevated to avoid laying them on eelgrass beds or the intertidal. They along with the potential use of a moored booster pump will require placement of some type of support pilings. Tidal scour and the associated loss of eelgrass will occur because of the presence of these pilings. Pregall MM (1993) Everett et al. (1995)

IND556-17
cont

20190701-5371 FERC PDF (Unofficial) 7/1/2019 4:11:14 PM

showed that stakes and pilings associated with rack oyster culture placed in eelgrass beds in the South Slough of Coos Bay resulted in scouring, alteration of sediment characteristics, and a reduction in eelgrass density.

Where the pipe is not elevated above the substrate, it will lay flat on the intertidal. Here it also has the potential for scour issues due to tidal and current movements. The routes of the dredged material transport pipelines cross low gradient intertidal areas. This will result in the pipelines forming dam-like structures that restrict or alter tidally mediated flooding and dewatering of intertidal areas. It will also act as a dam to the movement of small organisms such as recently settled and juvenile Dungeness crabs. Eelgrass is an important habitat for these animals (Fernandez et al. 1993).

FERC's assertion in Section 5.1.3.3 Wetlands of the DEIS that, "Based on our review of the Project and Jordan Cove and Pacific Connector's implementation of measures to reduce impacts on wetlands, we conclude that constructing and operating the Project would not significantly affect wetlands" is not supported by JCEP's plans for the eelgrass mitigation actions. FERC should not proceed without including an analysis of JCEP's eelgrass mitigation plan. Any revised analysis must be made available for further public comment prior to any FERC decision to grant the pending application.

2. MITIGATION AT THE KENTUCK SITE FOR WETLAND IMPACTS AT THE TERMINAL SITE AND ON THE PIPELINE ROUTE

The DEIS is incorrect in stating that the Kentucky project site is currently used for pasture. The Kentucky site has reverted to a freshwater wetland. This photo below was taken in December 2018.



IND556-17 cont.

IND556-18

IND556 continued, page 10 of 19

IND556-18 It is the COE's responsibility to ensure that impacts to waters of the U.S. are mitigated and the COE's and ODSL are currently working with the applicant on wetland mitigation requirements. As noted in the EIS, restoration and development efforts at the Kentucky project site, which is required to ensure the viability of the site, would result in some short-term and permanent impacts; however, the Compensatory Wetland Mitigation Plan accounts for these impacts and provides mitigation to offset these impacts. As described in section 4.3.3.2 of the draft EIS, Pacific Connector has submitted a list of areas where modifications to the requirements of our Plan and Procedures are requested. These include areas where the applicant has requested a 95-foot-wide construction right-of-way in a wetland or that TEWAs be located less than 50 feet away from a wetland. These proposed modifications to our Plan and Procedures and the justification for the requested modifications are provided in table E-1 of appendix E in the draft EIS. Section 3.0 of the EIS discusses alternative routes evaluated and as noted, to satisfy its responsibilities per the CWA Section 404(b)(1)(1) Guidelines, the COE also evaluated whether alternatives would be practicable. Further, as noted in the EIS, when making a decision on whether to issue a permit for the Project, the COE must consider whether the proposed Project represents the least environmentally damaging practicable alternative pursuant to the CWA section 404(b)(1) guidelines. The term "practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall purpose of the Project. The COE may only permit discharges of dredged or fill material into waters of the U.S. that represent the least damaging practicable alternative, so long as the alternatives do not have other significant adverse environmental consequences.

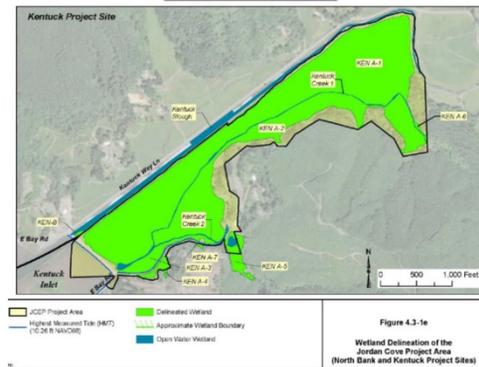
And this was taken in June 2019.



Further JCEP itself indicates the mitigation site is a wetland in numerous documents. One such example is provided below from their application to the Oregon Department of State Lands for removal and fill permit APP0060697.

IND556-18 cont.

Fig 4.3-1e JCEP's application to the Oregon Department of State Lands for removal and fill



permit APP0060697

JCEP's mitigation plans should not destroy one wetland to make another substandard one. JCEP's plans at Kentuck are not mitigation, they involve disposing of 300,000 cy of unconsolidated sand and silty sand sediments from dredging operations in the Coos Bay, installing the 36 inch gas pipeline through the wetland, and using the site as the entrance for the HDD drilling under Coos Bay. The DEIS does not assess any of these impacts on the Kentuck site.

IND556-18
cont.

FERC's May 2013 WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES states:

"The intent of these Procedures is to assist project sponsors by identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. Project sponsors shall specify in their applications for a new FERC authorization, and in prior notice and advance notice filings, any individual measures in these Procedures they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation." JCEP's plans outlined in their Wetland Compensatory Mitigation plan for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies fails to follow these procedures and as such the DEIS fails to adequately assess the impact of the Kentuck mitigation project.

FERC's May 2013, *Wetland And Waterbody Construction And Mitigation Procedures* publication provides guidance to JCEP in identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. JCEP plans for several actions as outlined in the DEIS violates these guidelines. For illustrative purposes, I outline a few examples below:

a. The guidance for wetland crossings (page 13) is that the applicant should, *"route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands."* The Pacific Gas Connector pipeline route violates this guideline in that it is routed through wetlands in Coos Bay and there are no alternate routes provided in the DEIS that fully avoid the Coos Bay wetlands. Page 13 has a graphic from JCEP's application to the Oregon Department of State Lands for a removal and fill permit APP0060697 showing how the preferred route of the gas pipeline runs through the Kentuck mitigation site. The alternative routes noted in the graphic have a lesser impacts on wetlands but are not included as alternatives in the DEIS. All impacts to wetlands as a result of the pipeline routing could be eliminated if an alternative route skirting Coos Bay were considered. The DEIS dismisses such a route noting that it would add to the pipeline length. A few additional miles to a 229 pipeline however should not be the reason for avoiding the Coos Bay wetland impacts.

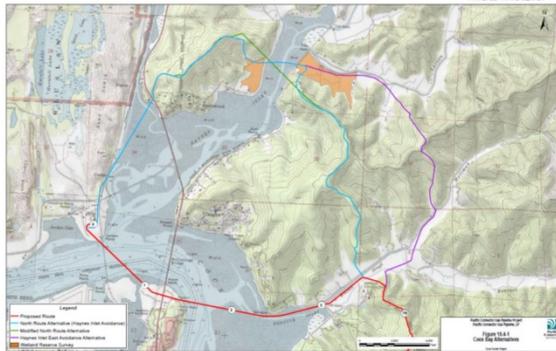


Figure 10.4.1 from JCEP's application to the Oregon Department of State Lands for a removal and fill permit APP0060697 showing the pipeline routes.

b. The guidance in FERC's *Wetland And Waterbody Construction And Mitigation Procedures* for installations associated with extra work areas and access roads (page 14) says that the applicant should, "Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land." The plans for the installation of the gas pipeline in the Kentucky mitigation site violate this guidance and do not minimize disturbance to wetlands. Page 13 shows a graphic from JCEP's application to the Oregon Department of State Lands for a removal and fill permit APP0060697 showing the construction techniques for the proposed "new and improved levee" to be constructed as part of the Kentucky wetland mitigation plan. The area under the 12' wide levee top labeled "access road" in this figure shows 11 consecutive 12" lifts of cement treated soil as forming the bulk of the structure. This road is needed to allow heavy equipment to access works areas where JCEP will install the portion of the pipeline to be buried in the Kentucky slough wetland mitigation site and install and access the drill pad for the Coos Bay East Horizontal Directional Drilling pipeline entry point at the Kentucky mitigation site. This violates FERC's guidance on wetland construction and mitigation and should be addressed by the FERC before any approvals are issued.

IND556-18
cont.

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

mounted equipment. FERC should include a more thorough examination of alternative wetland mitigation sites to that at the Kentuck site.

FERC's assertion in Section 5.1.3.3 Wetlands of the DEIS that, "Based on our review of the Project and Jordan Cove and Pacific Connector's implementation of measures to reduce impacts on wetlands, we conclude that constructing and operating the Project would not significantly affect wetlands" is not supported by JCEP's plans for the mitigation actions at the Kentuck site. FERC should not proceed without including an analysis of JCEP's wetland mitigation plan. Any revised analysis must be made available for further public comment prior to any FERC decision to grant the pending application.

INADEQUACIES IN THE DEIS RELATED TO SAFETY ISSUES OF JORDAN COVE ENERGY PROJECT'S (JCEP) PLANS

These comments were submitted at the FERC hearing in Coos Bay on Monday, June 24, 2019

The 2019 DEIS does not include sufficient detailed or qualitative analysis regarding several factors related to JCEP activities in Coos Bay. In this letter, submitted at the Coos Bay public hearing on June 24, 2019, I concentrate on the inadequacies that deal with the safety aspects of the Jordan Cove operations that are inadequately covered in the DEIS document.

1. The siting criteria for the LNG terminal is inadequate and ignores important international safety standards.

The Society of International Gas Tanker and Terminal Operators (SIGTTO), to which Jordan Cove belongs, has developed standards for the safe siting of LNG port facilities. These standards are published in: *Society of International Gas Tanker and Terminal Operators (SIGTTO). 1997. Site Selection and Design for LNG Ports and Jetties (IP no. 14)*. The proposed location of Jordan Cove' LNG terminal violates these standards in four major ways:

a. LNG terminals should not be sited in areas close to population centers (SIGTTO 1997).

The towns of North Bend and Coos Bay, the largest municipal areas on the Oregon coast, have a combined population of over 25,000 people.

b. LNG terminals should be located in remote areas away from other shipping traffic (SIGTTO 1997).

The physical size of Coos Bay means that there is essentially only one shipping channel that runs through the bay. There are no side channels away from population centers, or from existing shipping terminals, that are suitable for a Jordan Cove size project. The proposed LNG slip and access channel are less than half a mile from the Roseburg Forest Products dock.

c. LNG terminals should not be sited on an outside bend of a shipping channel. (SIGTTO 1997).

The proposed location for the Jordan Cove terminal is just such an outside bend where other vessels have to make a well-executed turn before positioning themselves to thread through the Coos railroad and US highway 101 bridges immediately up-bay from the proposed LNG terminal. The proposed location of the Jordan Cove plant increases the navigation hazard and the potential for accidents.

d. Simultaneous LNG operations and ship movements in adjacent berths should be avoided (SIGTTO 1997). This SIGTTO recommendation would be also be violated as the Port of Coos Bay plans to

IND556-19
cont.

IND556-20

IND556 continued, page 15 of 19

IND556-20 The siting, design, construction, and operating requirements for the Project are contained in 33 CFR 103 through 105, 33 CFR 127, and 49 CFR 193. These regulations do not require the use of SIGTTO publications. However, certain design criteria described as recommendations in SIGTTO Information Paper No. 14, Site Selection and Design for LNG Ports and Jetties, (i.e., strength/positions of mooring systems and breasting dolphins; interlinking of ship and shore ESD systems; installing quick acting valves at the PERC connections; using sensors to monitor the positions of the LNG loading arms; limiting ignition sources on the jetty; use of tugs and pilots to safely maneuver the LNG marine vessel to the jetty, etc.) are either required by regulation or are considered during the Coast Guard and FERC's evaluation of the project. In addition, as indicated in section 4.13.1.5 of the final EIS, FERC conducted an engineering review on the use of various layers of protection or safeguards to reduce risks of potential hazards to offsite public. FERC also reviewed potential impacts from natural hazards and external impacts from the surrounding areas.

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

IND556 continued, page 16 of 19

construct a cargo ship berth on the western shore of Coos Bay just downstream from the proposed Jordan Cove terminal, and as mentioned above the Roseburg Forest Products Chip Terminal berth is also close. The proposed terminal navigation access channel and NRI dredge area 4 are currently used as a vessel turning basin for vessels calling on the Roseburg Forest Products terminal which is immediately up-bay from the proposed LNG berth. This complex maneuver will take place immediately in front of the LNG carrier berth.

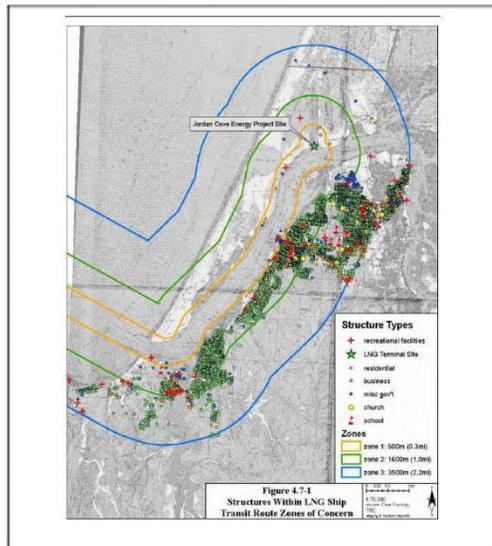
IND556-20
cont.

2. The potential for an accidental release of LNG from the terminal or a ship docked at the terminal is not addressed in the DEIS.

IND556-21

The DEIS does not contain information about the consequences of an accident that results in a release of LNG that ignites from the plant, or from a ship docked at the plant, or a ship traversing the Federal navigation channel. The 2015 DEIS contained information on such a scenario but this DEIS does not. The graphic 4.7-1 from this document is shown below.

IND556-21 See section 4.13 for an assessment of measures that would be implemented to reduce risk of spills, as well as measures that would be implemented in the event a spill does occur.



The omission of this information from the current DEIS does not allow for an adequate public analysis of safety risks.

IND556-21
cont.

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

IND556 continued, page 17 of 19

3. The DEIS fails to consider alternatives to and adequacy of the proposed tsunami safety wall at the LNG terminal.

IND556-22

The design scenario for the tsunami wall west of the LNG terminal is 46 feet in height. There is no indication if this is adequate as the last seismic event in the Cascadia Subduction Zone that produced a tsunami was in 1700. We can, however, learn from other subduction zone earthquakes as to the adequacy of these structures. The most recent is the 2011 9.0 quake in Japan that produced a tsunami that overtopped the sea wall defenses. (See photo below from the New York Times March 13, 2011). The area nearest to epicenter was inundated to a depth of 64 feet. Coasts north of the epicenter were inundated up to 132 feet.

https://en.wikipedia.org/wiki/2011_T%C5%8Dhoku_earthquake_and_tsunami

The DEIS does not contain any discussion of the adequacy of the proposed tsunami wall or any alternate designs.



<https://archive.nytimes.com/www.nytimes.com/2011/03/14/world/asia/14seawalls.html>

Of particular concern with regards to a tsunami hazard that is not addressed by the DEIS is the potential for a ship to be trapped in the LNG terminal berth. The size of the LNG ships proposed for Coos Bay require a channel depth of 45 feet MLLW to ensure sufficient under keel clearance. Thus

IND556-22 cont.

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

IND556 continued, page 18 of 19

they can only enter Coos Bay on high tides as the Federal Navigation Channel is only dredged to 39 feet. Should a local seismic event in the Cascadia Subduction Zone occur at tidal heights lower than 6 feet, a loaded LNG carrier would not be able to depart the LNG facility as the sailing draft would exceed the current Federal navigation channel depth. The implications for the LNG terminal workers, the tug boat operators, workers at the nearby Roseburg Forest Products Chip Terminal, and the adjacent communities are of serious concern. Numerous examples of how moored ships moved onto land during the 2011 Japanese tsunami indicate the safety implications of this possibility. These safety implications are not addressed in the DEIS.

IND556-22
cont

A ship sits among rubble Saturday in Kesennuma in northeastern Japan a day after the boat was swept inland by a tsunami. From: <https://www.arkansasonline.com/news/2012/feb/28/5-tsunami-debris-could-reach-north-america/>

The DEIS is inadequate in multiple ways, some of which I have outlined in this letter. FERC should not issue an Authorization and Certificate of Public Convenience and Necessity to JCEP. The Project should be denied with prejudice so that southern Oregon can move on and forward with

20190701-5371 PERC PDF (Unofficial) 7/1/2019 4:11:14 PM

IND556 continued, page 19 of 19

developing and supporting projects that do not have the adverse social, environmental, and public safety that are so prevalent in JCEP's project.

Yours sincerely,



Janet Hodder Ph.D.

REFERENCES CITED

- Coos Bay Lowland Assessment and Restoration Plan 2006. Coos Watershed Association.
- Curtis Carlson, 2001. National Oceanic and Atmospheric Administration Damage Assessment Center, Silver Spring, MD, and Robert W. Fujimoto, USDA Forest Service, Portland, OR
- Everett RA, Ruiz GM, Carlton JT, 1995. Effect of oyster mariculture on submerged aquatic vegetation: an experimental test in a Pacific Northwest estuary. MEPS 125:205-217.
- Miriam Fernandez, Oscar Iribarne, David Armstrong. 1993. Habitat selection by young-of-the-year Dungeness crab Cancer magister and predation risk in intertidal habitats Marine Ecology Progress Series 92:171-177.
- Fracked Gas Infrastructure: A Threat To Healthy Communities - A Special Report and Recommendations to the Governors of Oregon and Washington by Oregon Physicians for Social Responsibility and Washington Physicians for Social Responsibility (June 2019)
- Pregnull, MM. 1993. Regrowth and recruitment of eelgrass (*Zostera marina*) and recovery of benthic community structure in areas disturbed by commercial oyster culture in the south slough national estuarine research reserve, Oregon. MS Thesis. Bard College, Graduate School of Environmental Studies
- Cristina Pulido and Jens Borum. 2010. Eelgrass (*Zostera marina*) tolerance to anoxia. Journal of Experimental Marine Biology and Ecology. Volume 385, Issues 1-2, Pages 8-13.
- Ane Løvendahl Raun, Jens Borum. 2013. Combined impact of water column oxygen and temperature on internal oxygen status and growth of *Zostera marina* seedlings and adult shoots. Journal of Experimental Marine Biology and Ecology, Volume 441, pp. 16-22.
- Society of International Gas Tanker and Terminal Operators (SIGTTO). 1997. Site Selection and Design for LNG Ports and Jetties (IP no. 14).