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Position Paper

Folding the Impact of New Fossil Fuel Infrastructure into Oregon's Climate Agenda:

Recommended Amendments to the proposed Clean Energy Jobs bill

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Context for amendments:

Regional and Global Imperatives to Prohibit New Fossil Fuel Infrastructure

In September 2014, Sightline Institute published the study *Northwest Fossil Fuel Exports*, which revealed that, if all proposed oil, coal, and gas projects in the Pacific Northwest were constructed and operated at capacity, they would carry as much carbon annually as five Keystone XL pipelines. In the estimation of climate scientist James Hansen, releasing the carbon content of *one* Keystone XL pipeline would mean "climate game over". This dramatic revelation added a sense of urgency to the already active regional campaigns to prevent new coal, oil, and gas infrastructure because, literally, the fate of the planet was now on the line. The conclusions were as clear as day: the largest impact that the Pacific Northwest could have on global climate change would be in preventing the construction of large-scale fossil fuel export infrastructure.

This important information -- combined with the health and safety risks associated with fossil fuel infrastructure and seismic instability -- inspired local governments, like the cities of Portland and Seattle, to call for an end to new fossil fuel infrastructure. In late 2016, Portland amended its zoning code to prohibit new large-scale fossil infrastructure from being constructed within its city limits (In January 2018, this law was reviewed by the Oregon Court of Appeals and found not to violate the Dormant Commerce Clause of the U.S. Constitution). At the same time, regional advocates have been extremely successful in their efforts to oppose new fossil fuel infrastructure, including, recently, Portland General Electric's proposed construction of gas-fired power plants to replace the Boardman coal-fired power plant when it is retired. This spirited, regional, and grassroots campaign against new fossil fuel infrastructure has continued to grow. However, even with disasters like the 2016 oil train derailment in Mosier, the Oregon legislature has simply ignored the threats of new fossil fuel infrastructure to human health and the climate.

In addition, Oregon has fallen well behind in meeting its obligations to present and future generations. In his public comments to the Clean Energy Jobs Work Group on Regulated Entities, Angus Duncan, Chair of the Oregon Global Warming Commission, correctly pointed out that "Oregon is not on track to meet its GHG emissions reduction goals: not in 2020, 2035 or 2050.

Not even close." This assessment provides important additional context within which the cap and trade program is being advanced as a tool for significant climate action. If, as Governor Brown recently said, global warming is "the biggest threat to Oregon's environment, our economy, and way of life," Clean Energy Jobs falls well short of meaningfully addressing Oregon's real impact on climate change because it does not adequately account for the risks of new fossil fuel infrastructure.

The Jordan Cove Liquefied Natural Gas (LNG) Terminal and Pacific Connector Fracked Gas Pipeline

As legislators are doubtless aware, the Jordan Cove liquefied natural gas (LNG) export terminal and Pacific Connector fracked gas pipeline have been revived for a third time; Pembina Corporation has submitted its application to move forward with this pipeline to the Federal Energy Regulatory Commission, formally beginning the federal and state review processes. The climate impacts of this project -- which are enormous -- highlight the inadequacy of Clean Energy Jobs legislation as currently written and the scientific necessity for the Oregon legislature to prevent new fossil fuel infrastructure from being constructed.

In January, 2018, Oil Change International released a report called *Jordan Cove LNG and Pacific Connector Pipeline Greenhouse Gas Emissions* that clearly shows the destructive global impact of fossil fuel infrastructure like the Jordan Cove project. The report showed that, with a conservative accounting methodology, the life cycle emissions of the project would be 36.8 million metric tons CO2e per year, which is the equivalent of over 15 times the 2016 emissions from the Boardman coal plant. Less conservative (and more realistic) assumptions yielded a result of 52 million metric tons CO2e annually.

In addition to its enormous life cycle emissions it is clear from available information that the Jordan Cove export terminal would become the single largest GHG emitter in the state, by a large margin, after PGE's Boardman coal fired power plant closes. In the JCEP Resource Report #9, the Jordan Cove facility is expected to release 1,770,286 metric tons of CO2e per year (or 1,951,406 tons of CO2e per year). In addition, according to the PCGP Resource Report #9, the compressor station at Malin is estimated to emit 357,177 metric tons of CO2e (or 393,720 tons of CO2e per year) when combining the compressor station, pipeline leakage, and meter stations.

Table 2: GHG Emissions of the Jordan Cove Energy Project as a Percentage of Oregon's GHG Emissions

		Jordan Cove Energy Project		
		LNG Terminal Emissions	Total Project In-State Emissions	Total Project Lifecycle Emissions
	MMT CO_2e per year	1.8	2.2	36.8
Oregon 2015 Emissions	63.4	2.9%	3.5%	58%
Oregon 2050 Goals (75% below 1990)	14.1	13%	16%	261%
Under 2 MOU[b] (2 MT per capita by 2050[c])	11.2	16%	20%	329%

Source: Oil Change International

Both of these emissions sources would likely be accounted for in Section 25 of the current draft of the Clean Energy Jobs bills as "air contamination sources" under ORS 468A.005. As we understand the bills, the methane emissions (scientists at Cornell assess methane at 86 times more potent in global warming potential over a 20-year period than CO2) at the site of gas extraction would be unaccounted for. Fugitive emissions released during transport would also not be accounted for, nor would the eventual emissions from combustion of the gas that would pass through the Pacific Connector Pipeline & Jordan Cove LNG export facility. Under the current

drafts of the Clean Energy Jobs bills, life cycle emissions -- the sum total of carbon dioxide or carbon dioxide equivalent emitted at every phase of a fossil fuel project, including, but not limited to, extraction, refining, storage, transfer, and combustion -- for large fossil fuel infrastructure projects are effectively ignored and treated *de facto* as acceptable without limit. In practice, this means ignoring the largest threat to climate that the State of Oregon could reasonably exercise regulatory authority over.

Doing the math, under the conservative estimate, only 6% of the expected GHG emissions from the Jordan Cove project would be regulated under Clean Energy Jobs. Using the more realistic estimate, closer to 4% of total project emissions would be regulated.

So, **a bill being sold to the public as a comprehensive strategy for Oregon to lead the way on tackling climate change does nothing to stop the permitting or construction of the largest GHG project in the history of the state and then would ignore between 94% and 96% of its GHG emissions.**

In addition, several provisions of the recent draft bills create confusion as to how GHG emissions from the Jordan Cove project -- and projects like it -- would be accounted for. In both versions of the bill, Section 13(1)(c)(C)(ii) contains a provision directing the Environmental Quality Commission to "exclude from regulated emissions the greenhouse gas emissions from the combustion of fuel that is demonstrated to have been used as watercraft or aviation fuel." If Jordan Cove were to shift to producing fuels for marine vessels -- which is a possibility considering the International Maritime Organization's 2020 deadline to switch low-sulfur marine fuels -- would its combustion emissions be totally exempted from regulation? Also, it is unclear whether Jordan Cove and other fossil fuel export terminals be defined as an "emissions-intensive, trade-exposed industry" and receive allowances for an undetermined time period. The lack of clarity here is troubling considering the enormous impact of the proposed export terminal and pipeline.

At it stands, it is possible that the Oregon legislature will implement a significant carbon reduction strategy through Clean Energy Jobs while state authorities simultaneously allow the construction of the Jordan Cove project -- the largest carbon polluting project in the state. Because the Jordan Cove project requires state certification, this would mean Oregon taking affirmative state action to make the global climate situation significantly *worse*, while also causing direct harm and creating unnecessary risks to Oregon's forests, waters, tribal rights and resources, and residents. Given the context, this would be an absurd and hypocritical outcome.

To be clear, the solution is *not* to regulate more of the Jordan Cove project's emissions under a cap and trade system (and it is extremely unlikely that this would deter a mass fossil fuel export project). Instead, the legislature should cap the amount of fossil fuel infrastructure altogether, and prohibit all new major fossil fuel infrastructure -- such as pipelines and export terminals -- in the Clean Energy Jobs legislation. This would create consistency between Oregon's policy goals and regulatory action that would actually accomplish those goals. A "comprehensive policy that addresses climate change pollution in Oregon" -- as Senator Dembrow has described the Clean Energy Jobs program -- must address and account for the enormous climate impacts of new fossil fuel infrastructure projects.

Accounting for New Fossil Fuel Infrastructure in Oregon's Climate Policy

In Oregon, if we are going to spend significant energy an effort developing aggressive climate policy, we must take reality as we find it and act with urgency to reduce our largest contributions to the global crisis. There currently are no strong links between energy project assessment and climate

policy in Oregon. Unfortunately, and inconsistently with its intended goals, Clean Energy Jobs currently ignores the importance of preventing new fossil fuel infrastructure and Oregon's role in potentially certifying fossil fuel projects that would almost certainly eliminate the positive climate results of a cap and trade system. While there may be political reasons for avoiding the issue of new fossil fuel infrastructure at this time, we cannot negotiate with the climate. It is counterproductive to allow bureaucratic inconsistencies and regulatory dissonance that prevents us from acting with urgency to address Oregon's current and potential climate impacts. Either we draw carbon down to a level that allows future generations a livable planet or we do not. **Importantly, Clean Energy Jobs can be amended so that Oregon's carbon reduction strategies adequately address the impacts of new fossil fuel infrastructure.**

There are two approaches currently being used by jurisdictions to account for the climate and health & safety risks of new fossil fuel infrastructure: (1) prohibit all new fossil fuel infrastructure, and (2) subject new fossil fuel infrastructure proposals to a binding climate test.

The City of Portland was the first government that we are aware of to prohibit large-scale fossil fuel infrastructure (by way of zoning code amendment) in December of 2016. In June of 2017, the Seattle City Council passed a resolution calling for the development of code to prohibit new fossil fuel infrastructure and urging the institutions of state government to "exercise their authority to halt and reject all new fossil fuel infrastructure projects within Washington State[.]" The Vancouver, Washington City Council has amended its zoning code to prohibit new crude oil storage facilities. Whatcom County, Washington has passed a temporary moratorium on proposals to ship unrefined fuels while the county considers updates to its comprehensive plan. In November, 2017 Tacoma, Washington passed Interim Tideflat Regulations that prohibit new fossil fuel infrastructure. The City of Baltimore, Maryland is considering a crude oil ban. Many other local governments and elected officials are also considering prohibitions on fossil fuel infrastructure. There is clear momentum and a growing regional consensus around this approach.

The other option, a binding "climate test", refers to the use of the best available climate science to evaluate all proposed energy supply and demand policies and projects. In 2014, the Governments of Quebec and Ontario imposed a climate test on the Energy East pipeline project. In 2016, Canada's Prime Minister, Justin Trudeau pledged to apply a climate test to new fossil fuel infrastructure projects in the country, and it is expected that the National Energy Board Modernization process will incorporate the climate test into environmental review of new energy infrastructure. In 2017, Environmental Defense Canada published an extensive review of the climate test in *NEB Modernization: Aligning Energy Project Assessment with Climate Policy*. In addition, many national and international environmental organizations, including Oil Change International, NRDC, the Sierra Club, League of Conservation Voters, 350.org, and many others endorse the application of a climate test to energy projects and policies. In the 2017 Oregon legislative session, Senator Dembrow and Representative Helm sponsored SB 1007, which directed the Oregon Department of Energy to develop a climate test to conduct reviews for approval of proposed fossil fuel infrastructure projects (though the bill avoided enumerating any criteria or mandating denial of a project should infrastructure fail the climate test).

Below, we have included two possible amendments for Clean Energy Jobs that would adequately account for the climate risks (as well as the social and environmental costs) of new fossil fuel infrastructure. The first proposed amendment would prohibit future large-scale fossil fuel infrastructure in its entirety. The second proposed amendment would subject future large-scale fossil fuel infrastructure to a binding climate test.

Summary of amendments:

- ✓ OPTION 1: Prohibits state agencies from permitting the construction of new large-scale fossil fuel infrastructure
- ✓ OPTION 2: Subjects new fossil fuel infrastructure to a binding climate test

Proposed amendments:

OPTION 1: CAP ON LARGE-SCALE FOSSIL FUEL INFRASTRUCTURE

SECTION XX. (1) As used in this section:

(a) "Fossil fuel infrastructure project" means a project for new or expanded large-scale infrastructure used to produce, transport, store, or combust carbon-based fuels.

(b) "Large-scale" means infrastructure that emits over 25,000 metric tons of carbon dioxide or carbon dioxide equivalent per year.

(c) "Life cycle emissions" means the sum total of carbon dioxide or carbon dioxide equivalent emitted at every phase of a fossil fuel project, including, but not limited to, extraction, refining, storage, transfer, and combustion.

(1) No future large-scale fossil fuel infrastructure project shall be permitted in the State of Oregon, effective immediately upon the passage of this Act.

(2) The Department of Energy and the Department of Environmental Quality shall be jointly responsible for calculating the carbon impact of a proposed fossil fuel infrastructure project and enforcing this mandate.

(3) In calculating the total of metric tons of carbon dioxide or carbon dioxide equivalent expected from a proposed fossil fuel infrastructure project, the Department of Energy and the Department of Environmental Quality shall analyze the project's life cycle emissions.

OPTION 2: CLIMATE TEST FOR NEW FOSSIL FUEL INFRASTRUCTURE

SECTION XX. (1) As used in this section:

(a) "Application" means a request for approval of a proposed fossil fuel infrastructure project.

(b) "Carbon-based fuel" means coal, natural gas, petroleum products and any other product used for fuel that contains carbon and emits carbon dioxide when combusted.

(c) "Climate science" means science relating to the state of climate change including biological, physical, and social science.

(d) "Fossil fuel infrastructure project" means a project for new or expanded large-scale infrastructure used to produce, transport, store, or combust carbon-based fuels.

(e) "Global warming" means an increase in the average temperature of the earth's atmosphere that is associated with the release of greenhouse gases.

(f) "Greenhouse gas" means any gas that contributes to anthropogenic climate change, including but not limited to carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

(g) "Large-scale" means infrastructure that emits over 25,000 metric tons of carbon dioxide or carbon dioxide equivalent per year.

(h) "Life cycle emissions" means the sum total of carbon dioxide or carbon dioxide equivalent emitted at every phase of a fossil fuel project, including, but not limited to, extraction, refining, storage, transfer, and combustion.

(2)(a) The State Department of Energy shall, in consultation with the Environmental Quality Commission and any other interested state and federal agencies, develop a climate test to be used by state permitting agencies for evaluating applications for proposed fossil fuel infrastructure projects in this state.

(b) The purpose of the climate test is to reduce the impact of greenhouse gas emissions on global warming consistent with international goals to limit the global temperature increase and to ensure energy decisions are guided by the best available climate science by including as a part of an evaluation of any future fossil fuel infrastructure project an analysis of the project's life-cycle contributions to climate change.

(c) Any future fossil fuel infrastructure project that fails to meet the criteria of the climate test shall not be permitted in the State of Oregon, effective immediately upon the passage of this Act.

(3) In order to satisfy the climate test, a proposed fossil fuel infrastructure project must demonstrate:

(a) compliance with Oregon's greenhouse gas reduction goals, accounting for its life cycle emissions;

(b) compliance with global greenhouse gas reduction goals, accounting for its life cycle emissions;

(c) that it is unlikely to become a stranded asset or result in significant periods of underutilization;

(d) that adequate financial assurance mechanisms will be in place to ensure that the state will be fully reimbursed for any financial and economic harm resulting from catastrophic explosions, pollution, and abandoned infrastructure;

(e) that benefits exceed costs, including both market and non-market effects, such as the social cost of carbon, effects of ecosystem services, and effects on public health; and

(f) that it will not cause adverse effects on environmental justice communities.

(4) Any state agency utilizing the climate test to evaluate a future fossil fuel infrastructure project shall hold a public hearing and invite public testimony.

(5) Any state agency utilizing the climate test will make a determination of whether a future fossil fuel infrastructure project poses an acceptable or unacceptable risk based on climate test criteria.

(6) Any state agency finding that a fossil fuel infrastructure project poses an unacceptable risk to the climate based on climate test criteria shall reject the project on that basis.