



## **NORTHWEST TARGETS: COMMUNITIES THREATENED BY COAL, OIL, AND GAS**

**RISK ASSESSMENT SHOWS COLUMBIA RIVER, TACOMA, AND CHERRY POINT ARE IN THE CROSSHAIRS OF THE FOSSIL FUEL INDUSTRY.**

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The Pacific Northwest is at a crossroads. Caught between inland North America's huge fossil fuel deposits and Asia's fast-growing energy markets, Oregon and Washington have been inundated by fossil fuel development proposals. Adding as much as 100 million tons of coal per year, a million barrels of oil per day, and staggering volumes of methane gas, the tally of recent proposed projects includes at least six coal export terminals, more than a dozen oil-by-rail facilities, and numerous fracked gas and petrochemical projects.<sup>1</sup>

Although many of these projects are foundering in the face of a vigorous opposition movement, the threat has not passed. The industry continues to advance new projects in spite of concerns about pollution, fires, spills, congestion, and scores of other risks. Today, several communities in the Northwest are still under immediate threat of dirty energy development.

Sightline's report, "Northwest Targets," is a risk assessment for the region's communities. It reviews the history of local struggles with fossil fuel development proposals and gauges the risks of future proposals. By analyzing every community in Oregon and Washington targeted by large-scale fossil fuel proposals since 2010, Sightline aims to identify the most immediate threats and propose a remedy for them.

The report finds three places are the prime targets for dirty energy expansion projects:

- 1. Lower Columbia River:** A cluster of ports on the Columbia—Longview and Kalama in Washington and Port Westward in Oregon—have faced nearly a dozen fossil fuel proposals.
- 2. Tacoma, Washington:** This heavily industrialized Puget Sound city is wrestling with several active fossil fuel proposals and is almost certain to be the site of future plans.
- 3. Cherry Point, Washington:** Of great cultural importance to the Lummi Nation, this area is already a major center of fossil fuel activity and is at substantial risk of further development.

For reasons ranging from physical geography to the siting of existing available infrastructure, these three communities are under the greatest threat from fossil fuel development projects. But so are a number of other sites in the Northwest. As the fossil fuel industry looks to use the region as a transfer point to Asian ports, many places could become prime target areas if they do not take decisive action.

Northwest communities are not powerless, however. Each of them has at its disposal a sort of secret weapon: fortifying local land use laws to protect themselves from dirty energy expansion projects. And, in fact, several of the region's cities and counties are already beginning to change their land use laws to forestall coal, oil, and gas projects. By limiting the ability of dirty energy companies to build new projects, these places are protecting their residents and their local economies, even as they chart a course for other communities that face similar risks.

## Risk assessment for Northwest communities

The risk of new fossil fuel developments in Northwest communities is hard to predict. Yet it is possible to provide a rough rank-ordering of the most threatened places based on the quantity, scale, and track record of dirty energy proposals; the existence of connected fossil fuel infrastructure; and the presence of protective land use laws.

In what follows, Sightline assesses the current threat to each community in Oregon and Washington that has been targeted by at least one large-scale fossil fuel proposal since 2010. Ranked from least to most threatened, these communities are the Northwest's target communities.

## 10. Portland, Oregon

### Propane

Portland is the unquestioned leader in developing community-based protections against fossil fuel projects. A propane-by-rail export plan that initially seemed certain to win approval foundered in June 2015 in the face of sustained community opposition.<sup>2</sup> That opposition movement led to the December 2016 enactment of comprehensive city rezoning laws that prohibit the construction of major new fossil fuel infrastructure.<sup>3</sup> There are currently no active fossil fuel proposals for Portland, and future large-scale proposals are unlikely given the new land use protections.

## 9. Astoria, Oregon

### Gas

Just inside the mouth of the Columbia River, the Astoria suburb of Warrenton was the planned site of a large liquefied natural gas (LNG) facility that would have exported 9.6 million metric tons of gas annually. The facility would have been served by a new pipeline built across northwest Oregon.<sup>4</sup> The project died in April 2016 after years of opposition by locals and environmental groups.<sup>5</sup>

Astoria is not served by a rail line or large-scale pipelines, and no other fossil fuel developments have been proposed for the area. However, future increases in shipping from the many coal, oil, and petrochemical projects proposed for upstream sites on the Columbia may affect the town.

## 8. Boardman, Oregon

### Coal

Boardman, a small town in eastern Oregon on the Columbia River, is home to the only coal-fired power plant in the state, as well as a gas-fired power plant that is currently seeking permits for a major expansion.<sup>6</sup> In 2012, the port considered a proposed development to unload coal from trains and load it onto barges headed downstream to Port Westward, Oregon, where it would be transferred onto oceangoing cargo ships. The project died in August 2014 when a state agency declined to issue permits for the development.<sup>7</sup>

## 7. Anacortes, Washington

### Oil, Petrochemicals

Anacortes is home to two oil refineries at March Point on Puget Sound, each served by the Puget Sound Pipeline that delivers crude oil from Alberta by way of Canada's

Trans Mountain Pipeline.<sup>8</sup> Between 2010 and 2014, both facilities shipped out crude oil—nearly 5 million barrels from Tesoro and more than 1.2 million barrels from Shell—in addition to the refined petroleum products they produced onsite.<sup>9</sup>

In 2012, the Tesoro Refinery at Anacortes became the first site in the Northwest to receive loaded oil trains; it now accepts about 64,000 barrels per day by rail.<sup>10</sup> Tesoro may be selling a portion of that crude to the neighboring Shell Puget Sound Refinery, which in October 2016 withdrew its plans for an oil train unloading site of its own in the face of local opposition and delays.<sup>11</sup> The local Swinomish Tribe has mounted a legal challenge against BNSF, the railroad that serves the refineries, arguing that it is violating the terms of its easement agreement by running too many trains across tribal land. In January 2017, a federal judge allowed the Swinomish suit to proceed.<sup>12</sup>

One fossil fuel proposal at Anacortes is still active: Tesoro plans to expand its facility to produce xylene, a liquid petrochemical that is used mainly for manufacturing plastics and has well-established toxic risks. The xylene would be derived from components of light shale oil, which is typically delivered to Tesoro by rail.<sup>13</sup>

## 6. Coos Bay, Oregon

### Gas

Situated on the southern Oregon coast, Coos Bay has been the focus of two fossil fuel export proposals. A coal export proposal fell apart after the project's investors backed out in 2013.<sup>14</sup> More viable was a proposal from Jordan Cove LNG to build a large gas pipeline and a liquefied natural gas facility that could have produced 6.8 million metric tons of LNG per year.<sup>15</sup> The proposal collapsed in December 2016 when a federal regulatory agency denied permits on the basis of the pipeline's impact on landowners and the project's apparent lack of customers.<sup>16</sup> An official in the Trump Administration recently pledged to revive and permit the project, and the project backers appear to be trying to restart the permitting process.<sup>17</sup>

## 5. Vancouver, Washington

### Oil

Vancouver, Washington, located on the Columbia River, has been at the center of a major oil train controversy, involving two crude-by-rail proposals. The smaller of the two proposals involved expanding NuStar Energy's existing fuel-handling site to accommodate 22,000 barrels of oil per day (about two trains per week).<sup>18</sup> NuStar withdrew its expansion plans in March 2017 as a condition of receiving permits to retrofit its equipment to handle ethanol.<sup>19</sup>

Still under consideration is a giant project backed by the oil company Tesoro that would be the largest oil train unloading facility in North America, with a capacity of 360,000 barrels per day.<sup>20</sup> Under Washington state law, the governor will make a final decision about the proposal, probably sometime in 2017.<sup>21</sup>

In July 2016, the City of Vancouver enacted land use reforms that prohibit the construction of new crude oil facilities. The law does not affect Tesoro's current oil train proposal, but it does protect the community from future projects.<sup>22</sup>

## 4. Hoquiam, Washington

### Coal, Oil

Located on Grays Harbor on Washington's outer coast, Hoquiam is home to a range of industrial facilities. Although fossil fuel development at Hoquiam has been impeded somewhat by limited infrastructure, including the aging and badly under-insured Genesee & Wyoming-owned rail line that serves the port,<sup>23</sup> the area has nonetheless been the target of recent proposals to ship both coal and oil. RailAmerica, the railroad's former owner, proposed a coal export terminal in 2010 but scrapped the project two years later,<sup>24</sup> while the backers of a second, more speculative coal scheme abandoned their project in 2016.<sup>25</sup>

Oil projects have predominated. Three proposals for oil train terminals at Hoquiam—with a combined volume of up to 17 oil trains per week—have been vigorously opposed by the Quinault Indian Nation<sup>26</sup> as well as a range of local interests, including the commercial crabbing and fishing operations that use Grays Harbor and the nearby coast.<sup>27</sup> All three proposals appear to be dead or unlikely to move forward.

The first project was proposed by US Development, which aimed to build and operate a 40,000-barrel-per-day rail-to-vessel oil terminal.<sup>28</sup> The company quietly dropped its plans in November 2015.<sup>29</sup> The second proposal aimed to modify an existing biodiesel refinery owned by Imperium to ship as much as 73,500 barrels of crude oil per day. In January 2016, after the company was purchased by REG, the new owners announced that they no longer wanted to handle crude oil. Conspicuously, the firm has not yet modified the permit application to reflect that announcement.<sup>30</sup> The third proposal called for converting an existing methanol shipping site operated by Contanda (formerly Westway) to handle up to 49,000 barrels of crude-by-rail per day.<sup>31</sup> In January 2017, the Washington State Supreme Court ruled unanimously in favor of a lawsuit brought by the Quinault and local conservation groups, finding that the Ocean Resources Management Act, a state law restricting development in order to protect coastal natural resources, applied

to the Contanda project.<sup>32</sup> The decision will presumably affect the other oil industry projects as well, and it is unlikely that any of the projects at Hoquiam could now pass muster with regulators.<sup>33</sup>

In addition to the restrictions posed by state law, future oil terminal development at Grays Harbor is limited by residents' overwhelming rejection of the plans. The Hoquiam City Council voted unanimously in March 2015 to oppose future oil train projects at Grays Harbor, as did the city council of the area's largest city, Aberdeen. In August 2015, the city of Hoquiam adopted zoning changes to prevent the construction of large crude oil storage facilities, effectively ending the threat of future oil industry development plans.<sup>34</sup>

These moves were not altogether surprising given the memories of the *Nestucca* barge oil spill in 1988, one of the worst oil spills in Northwest history. During a winter storm, the barge collided with its tugboat, releasing 2.8 million gallons of heavy fuel oil into the Pacific Ocean near the entrance to Grays Harbor.<sup>35</sup>

### 3. Cherry Point (Xwe'chi'eXen), Washington

#### Coal, Oil, Gas, Propane

Already a major center of fossil fuel activity, Cherry Point (or Xwe'chi'eXen, as it is known to the Lummi Nation) sits about 10 miles south of the Canadian border on the shores of the Salish Sea. Oil companies BP and Phillips66 operate major oil refineries in the industrial area of Cherry Point, each served in part by the Puget Sound Pipeline, an arm of the Trans Mountain Pipeline.<sup>36</sup> Both refineries are equipped to receive crude oil by rail, and in recent months they have together been accepting about 66,000 barrels per day,<sup>37</sup> nearly enough to fill a mile-long train.<sup>38</sup> There is evidence that the refineries are shipping out not only refined petroleum products, but also occasionally crude oil—about 2.6 million barrels (six oil tankers' worth) between 2010 and 2014, according to government data.<sup>39</sup>

Xwe'chi'eXen is of great cultural and economic importance to the Lummi Nation, and the tribe, along with allied environmental groups and others, have fiercely contested fossil fuel development proposals there. The area was the focus of one of the most controversial fossil fuel proposals in the Northwest: the Gateway Pacific Terminal, which at 48 million metric tons per year would have been the largest coal export facility in North America.<sup>40</sup> In May 2016, the US Army Corps of Engineers halted review of the project proposal, ruling that it would contravene the Lummi Nation's constitutionally protected treaty rights.<sup>41</sup>

Yet the luster of the Lummi victory was soon dimmed by new fossil fuel proposals. Cherry Point is served by a dense network of natural gas and other



light hydrocarbon pipelines, as well as a rail spur operated by BNSF, making it a prime site for energy development proposals. Taking advantage of the existing infrastructure, a Canadian energy company called Petrogas appears to be exporting to Asia at least 30,000 barrels of propane and butane per day from the site of an aluminum smelter where the company recently purchased and upgraded some of the facilities. Although some of the fuel is probably supplied by pipeline from the refineries nearby, there is evidence that the facility is also receiving propane by rail from Canada—the rough equivalent of a mile-long trainload every other day.<sup>42</sup>

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A second Canadian company, Steelhead LNG, is planning a liquefied natural gas export project on Vancouver Island, a project that calls for building a new gas pipeline through Cherry Point and across the Strait of Georgia along the sea floor.<sup>43</sup> Meanwhile in British Columbia, energy giant Kinder Morgan is proceeding with its plans to construct a new oil pipeline alongside an existing line. The firm is telling investors that it may also double the capacity of its southern branch, the Puget Sound Pipeline, which serves the two Cherry Point refineries.<sup>44</sup>

Although Cherry Point remains at substantial risk of further fossil fuel development, local officials are acting to protect the area. The Whatcom County Council has enacted a moratorium on permitting for unrefined fossil fuels and enacted amendments to the county's comprehensive land use plan that will likely prohibit such development projects.<sup>45</sup>

## 2. Tacoma, Washington

### Oil, Gas, Petrochemicals, Others

By far the most urban of the Pacific Northwest sites targeted for fossil fuel expansion, Tacoma is a deep-water port on Commencement Bay in Puget Sound. Closely identified with a legacy of pollution, Tacoma remains a major center of industry and manufacturing. The city's industrial port area, called the Tideflats, is served by Tacoma Rail, an under-insured, publicly owned railroad that handles cargo delivered by BNSF and Union Pacific.<sup>46</sup> The city is also well served by highways and major fuel pipelines.<sup>47</sup>

Oil trains run to two sites in Tacoma: the US Oil refinery and Targa Sound Terminal. These sites receive a combined total of about 24,000 barrels of oil per day, the

equivalent of two or three mile-long trains each week.<sup>48</sup> Both sites have also shipped crude oil outbound—about 1 million barrels between 2010 and 2014.<sup>49</sup>

The US Oil refinery also receives a portion of its oil from Kinder Morgan's Trans Mountain Pipeline, by way of marine barges shuttling between Tacoma and the pipeline's terminus in Burnaby, British Columbia. Canadian government records show that refinery officials have been lobbying for expansion of the Trans Mountain Pipeline in order to obtain more shipments of Canadian crude (probably tar sands oil), which would pose a severe spill risk in Puget Sound.<sup>50</sup>

Targa Sound Terminal handles crude oil and a variety of refined petroleum products. The company is also applying for permits to accept trains carrying "natural gasoline," a light hydrocarbon liquid that is often derived from fracking operations.<sup>51</sup>

Another fossil fuel project has been proposed by Puget Sound Energy (PSE), a privately owned gas and power utility. PSE aims to build a liquefied natural gas facility in the Tideflats that would serve a range of purposes, including marine vessel fueling, shipments to other gas buyers in the region, and gas storage for use in the winter months.<sup>52</sup>

In 2015 and 2016, controversy erupted in Tacoma over a proposed gas-to-methanol plant backed by NW Innovation Works that would have been easily the largest methanol site in the world. In the face of ferocious public opposition, the company withdrew its permitting application in April 2016 to focus instead on similar projects at Kalama and Port Westward.<sup>53</sup>

For thousands of years, the Tideflats area was a home and important economic center for the Puyallup Tribe, whose reservation is adjacent to Tacoma's port area. Decades of industrial pollution have severely damaged tribe's natural resources,<sup>54</sup> and the Puyallup oppose new fossil fuel development in the area.<sup>55</sup> A coalition of local groups and residents is proposing protective land use laws to outlaw projects like the methanol facility in the Tideflats, but some elected officials at the city and port are reluctant to initiate near-term reforms, arguing instead for a complex "sub-area planning" process that is likely to take many years to complete.<sup>56</sup>

## **1. Lower Columbia River (Longview and Kalama, Washington; Port Westward, Oregon)**

### **Coal, Oil, Fracked Gas, Petrochemicals, Propane**

The major target sites for fossil fuel projects have been a trio of ports on the Lower Columbia River: Longview and Kalama in Washington and Port Westward in Oregon.



They are separate ports and separate communities, but their fates have been linked by interlocking fossil fuel proposals.

The Port of Longview, with its substantial infrastructure (including Interstate 5, a BNSF Railway mainline, and a major gas pipeline nearby), has been the focus of more recent fossil fuel proposals than almost any other site in the region. The litany of failed schemes slated for Longview includes two propane-by-rail export plans (both rejected by the port's commissioners) and an oil refinery that was a companion project to one of the propane proposals.<sup>57</sup>

Longview has also been at the center of the coal export debate. The backers of Millennium Bulk Terminals' proposed coal export facility at Longview are pursuing a last-ditch legal challenge after a state agency denied a key lease,<sup>58</sup> but most analysts believe the project is functionally dead.<sup>59</sup> With a capacity of 44 million metric tons, the facility would be the largest coal export terminal in North America. (The failed proposal for a coal export terminal at Cherry Point, Washington, would have had even greater capacity.<sup>60</sup>)

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The company behind the Millennium proposal also backed a proposed coal export operation miles downriver at Port Westward, Oregon. That project, dubbed Morrow Pacific, would have received coal from barges loaded upstream at Boardman, Oregon, and then transferred it onto cargo vessels bound for markets in Asia.<sup>61</sup> The Morrow Pacific project collapsed in August 2014 when a state agency declined to issue permits for the barge-loading operation.<sup>62</sup> It was the second failed coal export scheme planned for Port Westward. The first was a plan by energy company Kinder Morgan to deliver coal by rail to the site and then load it onto export vessels. That proposal failed in 2013 after a neighboring tenant declined to sublease its land to Kinder Morgan owing to concerns that coal dust from the site's operations would foul its electricity-generating facilities.<sup>63</sup>

Port Westward is served by a badly under-insured regional railroad that is currently used by fuel-handling company Global Partners to run ethanol trains to its storage and vessel-loading terminal at the port.<sup>64</sup> The Global Partners facility received crude oil trains for several years, but the firm abandoned oil in January 2016 in favor of other products.<sup>65</sup> New evidence indicates that the company is seeking to expand operations at the site, possibly adding petroleum products back onto its roster.<sup>66</sup>

Also on the drawing board are twin projects backed by NW Innovation Works, a commercial arm of the Chinese Academy of Sciences: huge gas-to-methanol plants at Port Westward and Kalama, just upstream from Longview.<sup>67</sup> State and local permitting agencies have nearly completed review of the latter project, which would be the largest methanol production facility in the world, consuming more natural gas than every electric power generator in Washington combined.<sup>68</sup> The proposed refineries at Port Westward and Kalama could each someday export 3.6 million metric tons of methanol annually to China, where it would be converted into olefins for use in manufacturing plastic products.<sup>69</sup>

None of the three ports on the Lower Columbia River has any comprehensive land use protections against future fossil fuel development. Indeed, officials at these ports appear to welcome new fossil fuel proposals.

## How Communities Can Protect Themselves

The coal, oil, and gas industries are less powerful than they appear. A coordinated region-wide opposition movement in the Northwest has successfully delayed, obstructed, or killed virtually every large fossil fuel project proposed in recent years. Meanwhile, most fossil fuel projects are at the mercy of weakening energy markets. Entire sectors such as coal have become uneconomical because prices are too low to support the cost of export schemes. Public demand for alternative energy continues to grow, and most energy analysts believe that a clean energy transition is already underway.

Even so, some sectors of the fossil fuel economy remain strong, including tar sands oil, fracked gas, and petrochemicals. Expansion plans will likely target Northwest communities for some years to come, bringing with them sizeable risks of pollution and threats to public health and safety. Faced with dwindling options, the industry is likely to concentrate its efforts on the few places that are undefended, such as the ports on the Lower Columbia River and Tacoma.

Communities that do nothing will be most at risk. But places that act decisively, using their powers of zoning and related land use authorities, can control their own destiny. Prohibitions against large-scale fossil fuel development protect residents' health and safety even while they advance opportunities for stronger economic growth.

Some communities in the region are already acting. Portland has probably the most assertive anti-fossil fuel zoning rules of any government in North America, though it is not alone in using local land use law to protect itself. Other Northwest cities, including Aberdeen, Hoquiam, and Vancouver, Washington, have adopted

a similar strategy, though more narrowly: prohibiting crude oil storage to inoculate themselves against the threat of new oil train proposals. Meanwhile, Whatcom County has renewed a temporary moratorium on unrefined fossil fuel developments while public officials have enacted a more comprehensive update to zoning laws. Elsewhere in North America, a number of local governments have in effect prohibited drilling, fracking, or oil-by-rail terminals.<sup>70</sup>

At a time when the federal government seems eager to advance fossil fuel exports, local land use authority offers a viable defense against the risks of these projects.<sup>71</sup> Laws that prohibit dirty energy expansion are legally enforceable tools that cement local authority. They are also a compass for the Northwest—pointing away from the risks of transforming into a global export center for coal, oil, and gas and toward a future of sustainable economic growth and clean energy leadership.

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## Methodology

Under the banner of a project called The Thin Green Line, Sightline Institute has been closely involved in the public debates over fossil fuel development in each of the communities analyzed in this report.<sup>72</sup> Although our analysis is informed by first-hand experience in each of these places, the risk assessment is based on the number, scale, and track record of dirty energy project proposals, as well as the existence of connected fossil fuel infrastructure and the presence of protective land use laws.

Still, any rank ordering of this sort is to a degree subjective and uncertain. For example, we exclude communities that have not faced at least one large-scale fossil fuel development proposal since 2010, including Seattle and Everett, which have robust infrastructure such as deep-water ports, high-quality rail access, and proximity to large pipelines that would greatly aid in developing dirty energy projects. In addition, many important questions do not lend themselves to definite answers: *How likely is a project to receive permits and operate profitably? Is a 48-million-ton-per-year coal export terminal more consequential than a 360,000-barrel-per-day oil-by-rail facility? How will changing politics in North America affect export plans in the Northwest?* The list of imponderables is extensive, but we hope that the “Northwest Targets” report offers sufficient information for readers to draw their own conclusions.

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**Sightline Institute** is a think tank providing leading original analysis of energy, economic, and environmental policy in the Pacific Northwest.

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