

No Crude Oil by Rail Resolution: Explanatory Memo

Recommendation: Adopt a resolution opposing the transport of crude oil by rail along the Union Pacific railway through Oregon, the Willamette Valley, and the City of Eugene.

Background: The eminent and growing danger of climate change has been recognized by international scientific and governmental bodies around the world. (1) Hoping to avoid worse-case scenario climate impacts, the U.S. government (2), the State of Oregon (3), and the City of Eugene (4) have all set greenhouse gas (GHG) emission-reduction goals. To meet these goals, the use of all forms of fossil fuel must be profoundly curbed, immediately.

A transition from fossil fuel energy to non-carbon-producing forms of energy has begun in the U.S. However the oil industries are continuing to increase domestic oil and gas production, including production from unconventional sources like the Bakken Formation in North Dakota and Canada and the tar sands in Alberta, Canada. Because of this production boom, a surge has occurred in the number of trains transporting crude oil throughout the U.S., including through the state of Oregon from production areas in Canada and the upper Midwest to refineries in California.

Trains carrying crude oil are called High Hazard Flammable Trains (HHFT) by the US Department of Transportation. (5) There are several routes taken by HHFT to the California refineries, one of which is into Northern California through Eugene on the Union Pacific (UP) tracks from Portland. The UP routes travel through difficult terrain (e.g. The Columbia River Gorge), along vital waterways, and through populated areas. A substantial portion of the refined product is ultimately destined for export, not for use in the U.S., despite claims about achieving domestic energy independence, producing record profits for the oil companies. (6)

Transport of crude oil by rail has increased already and is expected to expand.

The boom in oil production has led to a surge in transport of oil by rail throughout the U.S. The Association of American Railroads reports that 493,146 carloads of crude oil were shipped by rail in 2014, compared with 9,500 carloads in 2008, a fifty-fold increase in six years. (7)

Future oil and gas company decisions and market forces will continue to affect the transport of crude oil by rail. A 2015 report by the National Resources Defense Fund and 29 partners states that, if industry plans for pipelines, tankers and rail transport move forward, the amount of tar sands oil moving to the West Coast would increase by 1.7 million barrels per day over the next 2 decades. (8) New and/or existing infrastructure facilities in California could increase their capacity for refining and exporting petroleum products, which in turn would lead to a further increase in transport of crude by rail through Eugene. Market forces such as higher gas prices, refinery shutdowns for maintenance or emergencies, and denial of pipeline projects could mean more oil moving by rail through Eugene.

Transport of crude oil by rail is dangerous

Oregon and all states and provinces subject to this crude oil production and transport boom are extremely vulnerable to the dangerous impacts of a derailment, spill, fire or explosion.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) has issued a Rail Safety Alert warning that oil from the Bakken Formation and the Alberta tar sands is more flammable than other types of crude oil. (9)

Seventeen catastrophic incidents have occurred in the U.S. since 2013 involving these trains (10).

More crude oil was spilled in U.S. rail accidents in 2013 than in the preceding four decades combined; more than 1.5 million gallons was spilled in 2013 alone. (11)

On July 6, 2013, 74 rail car train loaded with flammable Bakken crude oil derailed in Lac Megantic, Quebec, dumping 1.5 million gallons of crude into the downtown. The resulting fire and explosions killed 47 people, orphaned 27 children, burned dozens of buildings, caused over \$1 billion in damage and required the removal and decontamination of 60,000 cubic meters of soil. Lac Megantic is very similar in size to Mosier and Eugene, and is also similar to these 2 towns in that the railroad track runs directly through downtown. (12)

In 2014, a record high of 141 "unintentional releases" occurred. (13)

On June 3, 2016, in Mosier, OR 16 oil cars derailed, and 4 exploded and burned. 42,000 gallons of Bakken crude were spilled into the soil, the Columbia River and the town's water supply. This derailment was caused by broken fasteners on the track itself. (14) Three days later, before Mosier had potable water or a functioning sewer system, trains carrying crude were again passing through the town. (15).

On September 27, 2016, 13 cars derailed in Eugene, one of which was loaded with liquefied petroleum gas (propane). (16)

Similar spills and accidents have occurred in numerous states such as Virginia, West Virginia, Wisconsin, Illinois, Alabama, North Dakota, and Montana. (17)

Current notification rules are inadequate

Federal notification rules make it impossible to know when HHFT will be traveling through Eugene. Because of concerns regarding energy security, federal oversight agencies do not allow the railroads to inform local jurisdictions when hazardous materials are moved by rail through their communities. By DOT rules promulgated in May 2015, the railroad's only obligation to report is to the Oregon State Emergency Response Commission (SERC) when large shipment are being moved (defined as 20 cars together, or 35 cars across an entire train, the latter equivalent to about one million gallons). (18) Despite lacking information critical to any preparedness planning, local jurisdictions must create their own emergency response plans.

Problems with car safety, and insufficient federal regulation/oversight

PHMSA has concluded that Bakken crude oil is more highly volatile and flammable than crude from other areas, and therefore more dangerous to ship by rail. Still, DOT and the various private rail companies have been slow to make changes in how crude is transported by rail that would increase safety.

Crude oil is being transported in significant volumes across the US and Canada in structurally deficient DOT 111 rail tank cars, originally designed to haul corn syrup. (19) Canada ordered a phase out of over 5,000 older rail tank cars by the end of May 2014. (20) Because the U.S. had not yet decided on tank car regulation, the new regulation in Canada forced these older tank cars to be used exclusively in the U.S.

New rules were promulgated by PHMSA in 2015 to increase the safety of transport of crude by rail within 3-5 years (e.g. Upgrades to DOT 111 rail tank cars and phasing in more of the upgraded CPC 1232 tank cars). (21) However, these rules only apply to trains which meet the definition of High Hazard Flammable Train (20 consecutive cars, or more than 34 cars of oil across an entire train); trains with fewer cars may continue to use the most unsafe cars. Many of the accidents described above involved fewer than 35 cars, (e.g. Mosier, OR: 4 cars). Furthermore, only about 20% of the faulty cars had been replaced as of the first quarter of 2016. (22)

The Rail Safety Improvement Act of 2008 is a U.S. federal law enacted by congress to improve rail safety by requiring positive train control (PTC) technology (computerized surveillance and braking technology to monitor and control train movements so as to prevent human-error accidents) to be installed on most of the US railroad network by 2015. However, in October 2015 and at the request of the Federal Railroad Administration, congress extended the deadline to 2018. (23)

Health problems related to train traffic

Crude oil trains hurt our community even when spills, explosions or fires do not occur. Exposure to particulate matter from diesel engines has been linked to impaired pulmonary development in adolescents; increased cardiopulmonary mortality; measurable pulmonary inflammation; increased severity and frequency of asthma attacks, emergency room visits, and hospital admissions in children; increased rates of heart attacks and strokes in adults; increased risk of cancer; and increased asthma and lung disease in children. (24)

Authority of state and local governments

Responsibility for mitigating the impacts of transporting crude and other commodities by rail has been challenged by the railroads, which claim federal pre-emption and assert that other agencies have no authority to mitigate the impacts. However, this is incorrect. Every permitting agency - cities, counties, and air districts- have the authority to deny land use and other permits if the applicant refuses to mitigate impacts. PHMSA and the Federal Emergency Management Agency recognize the rights of state and local

jurisdictions in these regards. (25, 26)

Other jurisdictions are taking action to keep their communities safe

Other state and local jurisdictions across the U.S. have used resolutions and other legal instruments to express their opposition to the transport of crude oil by rail through their communities, and to limit the expansion of refining, port and export facilities.

New York Governor Andrew Cuomo recognized the risk of transporting volatile crude by rail, passing Executive Order # 125 in 2014, directing New York State agencies to conduct a comprehensive review of crude by rail transport safety procedures and emergency response preparedness. (27).

Pursuant to this Order, Albany County, NY issued a moratorium on crude increases at the Port of Albany pending a public health investigation. (28)

In the western U.S., several cities in Oregon, California, and Washington have passed resolutions or taken other actions concerning the safety of and in opposition to transporting crude oil by rail. (29,20,31)

The No Crude Oil by Rail Resolution aligns with Eugene's laws

In July 2016, Eugene City Council voted unanimously to update the Climate Recovery Ordinance of 2014 (32) to reflect the "350 ppm by 2100" standard which scientists say is needed to stabilize our climate system. To achieve these community-wide GHG reductions, the City is mandated to reduce its emissions by 7.6% annually. In order for the city to reach this goal, it must promote renewable and sustainable means of transportation and lifestyle, which requires the phase out of fossil fuels. Opposing crude by rail through Eugene would align with these progressive laws, laying out a path to a cleaner and healthier planet for future generations.

End: No Crude Oil by Rail Resolution: Explanatory Memo

Citations

1. United Nations Framework Convention on Climate Change
<http://unfccc.int/2860.php>

2. National Aeronautics and Space Administration
<http://climate.nasa.gov>

3. State of Oregon, position on climate change
https://www.oregon.gov/energy/P-I/REWG/docs/climage_change_agenda_1008.pdf
4. City of Eugene, Climate Recovery Ordinance
<https://www.eugene-or.gov/3211/Climate-Recovery-Ordinance>
5. DOT May 2015 final rule: "Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High Hazard Flammable Trains"
 1. Definition of high hazard flammable trains (20 cars together or 35 across entire train, 70 for braking rules)
6. Los Angeles Daily Times
<http://www.dailynews.com/opinion/20150727/gas-being-exported-from-california-despite-shortage-thomas-elias>
7. Association of American Railroads
<https://www.aar.org/BackgroundPapers/US%20Rail%20Crude%20Oil%20Traffic.pdf>
8. National Resources Defense Fund
<https://www.nrdc.org/experts/anthony-swift/report-highlights-industry-plans-flood-west-coast-tar-sands>
9. PHMSA Rail Safety Alert: Bakken is more flammable than other crude oil
http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/1_2_14%20Rail_Safety_Alert.pdf
10. [riverkeeper.org](http://www.riverkeeper.org) <http://www.riverkeeper.org/campaigns/river-ecology/crude-oil-transport/crude-oil-transportation-a-timeline-of-failure/>
11. McClatchy reports, spills in 2013
<http://www.mcclatchydc.com/news/nation->
12. Wikipedia, Lac Megantic Rail Disaster
https://en.m.wikipedia.org/wiki/Lac-Mégantic_rail_disaster
13. NBC News, citing PHMSA data
<http://www.nbcnews.com/news/investigations/oil-train-spills-hit-record-level-2014-n293186>
14. U.S. Department of Transportation, Federal Railroad Administration, Preliminary report, June 32, 2016
<http://www.efsec.wa.gov/Tesoro%20Savage/Adjudication/Exhibits/Tesoro/Exhibit%203125-000005-VAN.pdf>
15. thinkprogress.org, Mosier spill
<https://thinkprogress.org/they-did-everything-they-could-have-done-the-tragedy-of-the-oregon-oil-derailment-337740469311#.m84oy5z2r>
16. Register-Guard, Eugene derailment.
<http://registerguard.com/rg/news/local/34835321-75/13-car-train-derailment-prompts-hazmat-precautions-in-west-eugene.html.csp>
17. [riverkeeper.org](http://www.riverkeeper.org). <http://www.riverkeeper.org/campaigns/river-ecology/crude-oil-transport/crude-oil-transportation-a-timeline-of-failure/>
18. U.S. Department of Transportation, Notification of state and local jurisdictions regarding oil train movements https://www.transportation.gov/sites/dot.gov/files/docs/final-rule-flammable-liquids-by-rail_0.pdf

19. U.S. Department of Transportation, Safety requirements for oil tank cars
https://www.transportation.gov/sites/dot.gov/files/docs/final-rule-flammable-liquids-by-rail_0.pdf
20. Transportation Safety Board of Canada
<http://www.tsb.gc.ca/eng/recommandations-recommendations/rail/2014/rec-r1401.asp>
21. U.S. Department of Transportation, Safety requirements for oil tank cars
https://www.transportation.gov/sites/dot.gov/files/docs/final-rule-flammable-liquids-by-rail_0.pdf
22. Register -Guard: Upgrading or replacing out-dated tank cars.
<http://dot111.info/2016/07/13/slow-progress- seen-on-faulty-crude-oil-rail-cars/>
23. National Transportation Safety Board, delay in PTC requirement
<http://www.nts.gov/safety/mwl/Pages/mwl7-2016.aspx>
24. California Office of Environmental Health Hazard Assessments, Health hazards of diesel fuel
<http://oehha.ca.gov/air/health-effects-diesel-exhaust>
25. PHMSA, hazard mitigation
http://phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/Pipeline/PIPA_Hazard_Mitigation_Primer_Final_508v4.docx
26. FEMA, hazard mitigation <https://training.fema.gov/hiedu/docs/fem/chapter%207%20-%20hazard%20mitigation.doc>
27. Department of Environmental Conservation, New York State: Comprehensive review of safety procedures and emergency preparedness re: oil trains
<http://www.dec.ny.gov/permits/95614.html>
28. Albany County, NY, Albany Moratorium http://www.albanycounty.com/Libraries/County_Executive/DOH_Moratorium.sflb.ashx
29. Portland, OR 2015, Fossil Fuel Infrastructure Binding Policy
<http://www.portlandoregon.gov/citycode/?c=69548&a=557499>
30. California jurisdictions with pertinent resolutions
<http://maps.fractracker.org/latest/?appid=2c9e89bd4c9a4047a814ccce7f1d7514>
31. Seattle WA actions re: oil trains
<http://www.seattle.gov/council/issues/oil-train-safety>
32. City of Eugene, Climate Recovery Ordinance
<https://www.eugene-or.gov/3211/Climate-Recovery-Ordinance>