



Neighborhood
Association
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To: City and County Officials

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THE CEI HUB: LINNTON'S CALL FOR ACTION BY THE CITY AND COUNTY

Aware of the extreme threat that Linnton faces by our proximity to millions of gallons of fuel sitting on unsteady ground, not to mention the colossal risks to Portland and the entire state in the event of a catastrophe, the Linnton Neighborhood Association (LNA) is continuing to do everything in its power to reduce the risks associated with the CEI Hub.

LNA endorsed a statement in 2018 demanding that the Critical Energy Infrastructure (CEI) Hub, known by many as "the tank farms," decentralize and relocate to stable bedrock areas based on findings and recommendations of official agencies, seismic experts, and investigative reporters. Specifically, we examined "The Oregon Resiliency Plan" by Oregon Seismic Safety Policy Advisory Commission (OSSPAC, 2013); Oregon's Department of Geology and Mineral Industries (DOGAMI); Scott Burns, Portland State University seismic geologist; Tony Schick, writing for OPB "How We Mapped NW Portland's 'Tank Farms'" (2015); City Club of Portland, "Big Steps Before The Big One" (2017); and Kathryn Schulz, "The Really Big One" (2015)
<https://www.newyorker.com/magazine/2015/07/20/the-really-big-one>

Two years later, in 2020, we updated our opposition statement with newly released information from Oregon Department of Energy (ODOE); Portland Bureau of Emergency Management (PBEM); Peter Dusicka, Portland State University civil engineer; and OSSPAC's 2019 report. OSSPAC's major finding: "The Critical Energy Infrastructure Hub is a major threat to safety, environment, and recovery after a Cascadia Subduction Zone earthquake **on par with the 2011 Fukushima nuclear meltdown in Japan.**"

Both LNA statements were co-signed by 50 Portland Neighborhood Associations, faith-based organizations, and other groups and are available upon request.

Since that time, new events have transpired as we move forward in addressing risks that the CEI Hub poses to our lives, our health, and the environment.

- LNA sent two letters to executives at each of the CEI Hub tank farms, requesting they meet with local residents to discuss our safety and health concerns. They did not respond. We did receive communication from the Western States Petroleum Association, assuring us of our safety in view of the existing industrial regulations and safety practices. This did nothing to allay our fears. The vast majority of tanks are so old they don't meet any safety regulations.
- Multnomah County and the City of Portland in conjunction with EcoNorthwest conducted a full seismic risk assessment of the CEI Hub ("Impacts of a Cascadia Subduction Zone Earthquake on the CEI Hub" 2021) to identify the magnitude and extent of potential fossil fuel releases at the CEI Hub from an 8.0-9.0 Cascadia Subduction Zone (CSZ) earthquake and to evaluate the resulting damages. The first part of the report was published in July 2021 and is the most detailed and comprehensive risk analysis to date: The second part of the report, a financial risk analysis, is expected soon.



The CEI Hub is located on land that has “high to very high” risk of liquefaction which would almost certainly result in an environmental catastrophe – fires, explosions, and/or massive fuel spills into the Willamette and Columbia Rivers.

It is important to recognize that liquefaction is influenced by many factors including type of energy, shaking intensity, location, and earthquake magnitude. The United States Geological Survey (USGS) reports that liquefaction could occur with a 4.0-5.0 magnitude earthquake. It can also result from a major explosion at a fuel storage terminal or liquefied natural gas storage facility.

In summary, EcoNorthwest singled out only one of many potential causes for an environmental catastrophe at the CEI Hub. Others include:

- Natural disasters: lightning (the #1 cause for fuel terminal fires around the world), severe weather, earthquakes and aftershocks, and volcanic activity (For reference, Mt. St. Helens’ eruption was a magnitude 5).
- Equipment failure: pipeline leaks, aboveground storage tank (AST) leaks, electrical fires, etc. A gas leak at a liquefied natural gas storage facility could create an incineration zone of several square miles
- Human error: a major concern when offloading fuels from a marine vessel or railroad tank car or transporting fuels from a terminal through a pipeline onto a marine vessel for export.

The bottom line: 630 tanks of varying sizes throughout the CEI Hub hold a combined active storage tank capacity of at least 350.6 million gallons (estimated to be 362.9 million gallons by Dusicka and Norton, 2019) and 63% of these tanks were built before 1993 and are not up to current seismic standards. They “will likely fail during the CSZ event and release 50 to 100 percent of contained materials.” Tanks built after 1993 are predicted to lose 10% of their contents. Given the above, estimates of fuels released are between 100 and 200 million gallons of fuel. This amount of fuel is unprecedented in worldwide spills to date.

Because containment structures are insufficient to hold the potential cumulative volume of releases from multiple tank failures, substantial fuels will flow into the Willamette River and into soil, and some will vaporize into the air. Over 150 different types of material are stored at the CEI Hub, each with a unique chemical composition that presents unique risks for damage and ignition; their locations predict whether they will release into water or land. Earthquake movement and failed power lines can cause sparking, fires, and explosions. More than half of the stored materials are flammable. Toxicity of spilled and burning materials magnifies the risks to humans, animals, and the environment. How far these materials spread and where they end up depends on multiple factors.

Impacts that could be attributable to releases at the CEI Hub include:

- Loss of life and injuries directly related to releases at the CEI Hub site or adjacent parcels;
- Colossal and long-term financial loss;
- Permanent geographic and structural damage;
- Effects on navigation and river-related commercial activity;
- Impacts on recreation;
- Compromised air quality with short-term and long-term effects;
- Impacts on habitat with short-term and long-term effects on the environment;
- Impacts to cultural resources.



Engineers for a Sustainable Future (ESF) has detailed potentially disastrous environmental and financial risks due to the CEI's Hub's location in a small area of Linnton that is:

- near a major city,
- in an earthquake liquefaction zone,
- along a river in an environmentally fragile zone, and
- also home to pipelines, fuel railcars, and marine tankers.

These factors are further compounded by the close proximity of the 9 fuel companies with a total volume of fuels that exceed fuel volumes of all previous spill disasters. Thus, there are no analogues—we are in unique situation, one that predicts an unparalleled catastrophe.

ESF reports that Clean Rivers Cooperative (CRC), the non-profit Oil Spill Removal Organization (OSRO) that lists CEI Hub industries as members and conducts trainings for them, has an excellent reputation for managing spills but their history reveals these are relatively small spills. CRC's current worst case spill response plan is to manage 12.6 million gallons—inadequate for 8 of the 9 CEI Hub companies. Collectively, the CEI Hub's total fuel capacity is 363,224,490 gallons—28 times greater than the CRC's maximum spill response plan. What are the CEI companies' spill recovery plans?

We, residents of Linnton and local communities, have sufficient information to grasp the magnitude of the CEI Hub threat to our lives, our land, and wildlife. Given the projected loss of life, damage to infrastructure, waterways, transportation, and utilities and the incalculable financial impact and extended recovery period (decades, with environmental damage exceeding this), we cannot tolerate inaction. The public is aware and motivated to support this effort. Activists are marshalling and strategizing. Financially, in view of the multi-billion dollar threat that the CEI Hub poses, strategic investments in reducing risks are wise and fiscally imperative.

This critical situation demands action. We call on the City of Portland and Multnomah County with their authority, as reported in the 2019 OSSPAC report, to act. We understand that:

- The City has the authority to legislate and can increase county standards but not reduce them.
- The County has the authority to legislate and can increase state standards but not reduce them.
- The State has the authority to legislate and can increase federal standards but not reduce them.

If The City and County take no action, we will adopt media and social media campaigns to heighten public awareness that local jurisdictions are not acting to make us safer from the CEI Hub threat.

Sincerely,

Richard Barker
Linnton NA Chair

Nancy Hiser
Linnton NA Environmental Committee

Shawn Looney
Linnton NA Environmental Committee