

Oregon's Fuel Sector Improvements: *Testimony Supporting HB-2151, 2152, 2949 and 3450*

^s
2025 HEMGGV Committee
February 27, 2025

Yumei Wang, PE, F.ASCE

Portland State University

Senior Advisor on Infrastructure Resilience and Risk

Affiliate Faculty in Civil and Environmental Engineering

SLS LLC owner; consultant on federal projects

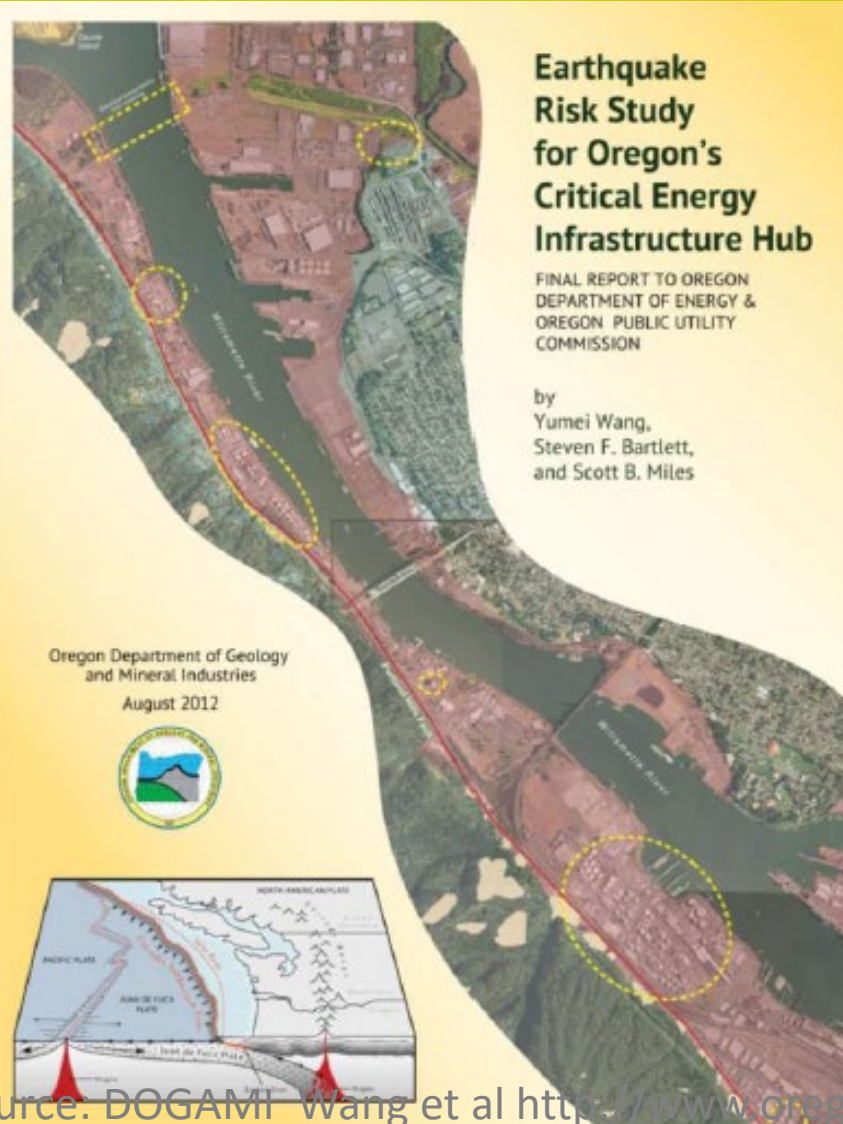
Former OSSPAC chair; Retired DOGAMI engineer



2013

Critical Energy Infrastructure (CEI) Hub

High Risk: earthquake-shaking, liquefaction, fires



Liquefaction Damage is Common by Ports



Source: TCLEE 2011 Tohoku



2010 Haiti M7

CEI Hub: *Liquefaction* Hazards are Extremely High Facilities Built on Loose River Soils (Hydraulic Fill)



CEI Hub Fuel Terminals: Docks & Tanks are Vulnerable

Close-up



Chile (2010)



(Source: DOGAMI)

Source: TCLEE

Senator Michael Dembrow sponsored 2022 SB 1567

DEQ and ODOE to help protect against fuel spills, fires and fuel shortages

1989 Valdez oil spill damage



2011 Japan earthquake—fire damage



Recommend: Bi-Partisan Co-Sponsors and Pass

- **HB 2152** Geographic Diversification of Fuel Supplies: reduce statewide fuel shortages during disasters (ODOE)
- **HB 2151** Seismic Risk Mitigation Fund: expansion of use (DEQ)
- **HB 2949** Risk Bond Study: financial risk of CEI Hub vulnerabilities (DEQ)
- **HB 3450** CEI Hub Long Term Planning: energy-secure transitioning options (ODOE)

HB 2152: Reduces Local Fuel Shortages During Disasters

Fuel Shortage
Disaster

Stage 1: On-Site Fuel
(hospital example)



Stage 2: Local Fuel Supplies
(currently very limited)



3 weeks

Stage 3: State/ODOE Delivers to Counties

Oregon Fuel Action Plan



Plan, Prepare, Respond, & Recover
From Severe Fuel Shortages



Recommend: Bi-Partisan Co-Sponsors and Pass

- **HB 2152** Geographic Diversification of Fuel Supplies: reduce statewide fuel shortages during disasters (ODOE)
- **HB 2151** Seismic Risk Mitigation Fund: expansion of use (DEQ)
- **HB 2949** Risk Bond Study: financial risk of CEI Hub vulnerabilities (DEQ)
- **HB 3450** CEI Hub Long Term Planning: energy-secure transitioning options (ODOE)



February 27, 2025

To: House Committee on Emergency Management, General Government, and Veterans

Re: **Support for HB 3450 on CEI Hub energy storage transition planning**

Dear Chair Tran, Vice-Chair Grayber, Vice-Chair Lewis and members of the committee

I strongly support Representative Tran's HB 3450, which requires the Oregon Department of Energy to develop an energy storage transition plan for the Critical Energy Infrastructure Hub (CEI Hub) in a manner that is mindful of Oregon's energy needs during disaster response and recovery. In my role as an engineer who focuses on disaster preparedness of critical infrastructure and decades-long involvement with Oregon's energy sector vulnerabilities, I am confident that this bill should be passed into law.

In 2013, I coauthored a DOGAMI report that first identified a six-mile long area along the lower Willamette River with an extremely high risk of liquefaction along with a concentration of important energy sector facilities and named that area the Critical Energy Infrastructure Hub (CEI Hub) (report at: [oregon.gov/energy/safety-resiliency/Documents/2013 Earthquake Risk Study in Oregon's Critical Energy Infrastructure Hub.pdf](https://www.oregon.gov/energy/safety-resiliency/Documents/2013%20Earthquake%20Risk%20Study%20in%20Oregon's%20Critical%20Energy%20Infrastructure%20Hub.pdf)). Since then, I have learned more about the importance to transition away from the current uses of fossil fuels, as well as the risk and mitigation needs of bulk fuel terminals at the CEI Hub. Understanding the enormous seismic risk at the CEI hub, the negative impacts of our current fossil fuel consumption, and the need for Oregon's energy security, I assisted Senator Michael Dembrow (retired in 2024) with information for Representative Tran's current bill.

I urge you to pass HB 3450, which will allow ODOE to guide Oregonians to plan for an energy-secure future. Thank you for your leadership.

Sincerely,

Yumei Wang, PE, CEG, F.ASCE, Past Chair of OSSPAC

Senior Advisor on Infrastructure Resilience and Risk

Affiliate Faculty in Civil and Environmental Engineering at Portland State University

Reference Notes:

[HB 3450 to develop an energy-secure transition plan for the CEI hub](https://olis.oregonlegislature.gov/liz/2025R1/Measures/Overview/HB3450)

<https://olis.oregonlegislature.gov/liz/2025R1/Measures/Overview/HB3450>

February 27, 2025

To: House Committee on Emergency Management, General Government, and Veterans

Re: **Support for HB 2152** on Statewide Geographic Diversity of Fueling Stations for Disasters

Dear Chair Tran, Vice-Chair Grayber, Vice-Chair Lewis and members of the committee

I strongly support HB 2152, which calls for development and implementation of a Statewide Geographic Diversity of Fueling Stations for Disaster Reserves. In my role as an engineer who focuses on disaster preparedness of critical infrastructure and decades-long involvement with Oregon's energy sector vulnerabilities, I thank Senator Michael Dembrow (retired in 2024) for his leadership role in preparing this critically important bill and am confident that it should be passed into law.

When the Oregon Department of Energy was tasked to create a State Energy Security Plan that addresses geographically diverse fuel supplies by the 2022 SB 1567, that mandate led to the 2024 Plan found here: [State of Oregon: Safety & Resilience - Oregon Energy Security Plan](#). This plan lays out an important foundation to this concept, however, more progress is needed to closely examine and create opportunities for actual implementation. To better safeguard Oregonians, incentives are warranted and implementation is urgently needed. ODOE is well suited to continue to lead this effort.

I urge you to pass HB 2152, which will protect the lives and economic stability of Oregonians. Thank you for your leadership.

Sincerely,

Yumei Wang, PE, CEG, F.ASCE, Past Chair of OSSPAC

Senior Advisor on Infrastructure Resilience and Risk

Affiliate Faculty in Civil and Environmental Engineering at Portland State University

Reference Notes:

[HB 2152](#):

<https://olis.oregonlegislature.gov/liz/2025R1/Downloads/MeasureDocument/HB2152/Introduced>

February 27, 2025

To: House Committee on Emergency Management, General Government, and Veterans

Re: **Support for HB 2151** on expansion of DEQ's usage of the Seismic Risk Mitigation Fund

Dear Chair Tran, Vice-Chair Grayber, Vice-Chair Lewis and members of the committee

I strongly support HB 2151, which expands the ways in which monies in the State's Seismic Risk Mitigation Fund may be used. In my role as an engineer who focuses on disaster preparedness of critical infrastructure and decades-long involvement with Oregon's energy sector vulnerabilities, I thank Senator Michael Dembrow (retired in 2024) for his leadership role in preparing this important bill and am confident that it should be passed into law.

When the Fund was first created by 2022 SB 1567, the purpose of the fund was directed towards assisting fuel terminals with seismic mitigation. Since the 2023 creation of DEQ's fuel tank seismic stability program, DEQ and stakeholders of the Critical Energy Infrastructure Hub on the lower Willamette River have deepened their understanding of the urgent need for improved safety beyond the property lines of the terminals. While no funds have yet been made available and the originally intended use remains highly appropriate, it would be beneficial to expand the allowable use to directly assist neighboring communities at high risk to harm. Considering DEQ's expedient progress in their new program as evidenced here [Department of Environmental Quality : Overview of Fuel Tank Seismic Stability : Seismic Stability : State of Oregon](#), DEQ is well suited to administer future available funds for the expanded purposes.

I urge you to pass HB 2151, which will protect the lives of Oregonians. Thank you for your leadership.

Sincerely,

Yumei Wang, PE, CEG, F.ASCE, Past Chair of OSSPAC

Senior Advisor on Infrastructure Resilience and Risk

Affiliate Faculty in Civil and Environmental Engineering at Portland State University

Reference Notes:

[HB 2151](#):

<https://olis.oregonlegislature.gov/liz/2025R1/Downloads/MeasureDocument/HB2151/Introduced>

February 27, 2025

To: House Committee on Emergency Management, General Government, and Veterans

Re: Support for HB 2949 DEQ Risk Bond Study on Bulk Fuel Terminals

Dear Chair Tran, Vice-Chair Grayber, Vice-Chair Lewis and members of the committee

I strongly support Representative Tran's HB 2949, which requires the Department of Environmental Quality to contract with a third party to study and assess financial assurance requirements for owners or operators of bulk oils and liquid fuels terminals. In my role as an engineer who focuses on disaster preparedness of critical infrastructure and decades-long involvement with Oregon's energy sector vulnerabilities, I am confident that this bill should be passed into law.

In 2013, I coauthored a DOGAMI report that first identified a six-mile long area along the lower Willamette River with an extremely high risk of liquefaction along with a concentration of important energy sector facilities and named that area the Critical Energy Infrastructure Hub (CEI Hub) (report at: [oregon.gov/energy/safety-resiliency/Documents/2013 Earthquake Risk Study in Oregon's Critical Energy Infrastructure Hub.pdf](https://oregon.gov/energy/safety-resiliency/Documents/2013%20Earthquake%20Risk%20Study%20in%20Oregon's%20Critical%20Energy%20Infrastructure%20Hub.pdf)). Since then, I have learned more about the risk and mitigation needs at the CEI Hub and learned more about the expected and actual performance of fuel facilities (e.g., I investigated the aftermath of the 2011 Tohoku earthquake and tsunami disaster). Understanding the enormity of the risk at the CEI hub, I assisted Senator Michael Dembrow (retired in 2024) and other legislators with the creation, amendments and bi-partisan passage of 2022 SB 1567, which requires DEQ to regulate the safety of bulk fuel terminals. Information made available from the DEQ's new fuel tank seismic stability program ([Department of Environmental Quality : Overview of Fuel Tank Seismic Stability : Seismic Stability : State of Oregon](#)) supports the need for the public to better understand the financial risk of large-scale CEI hub fuel facilities-related disasters.

To better safeguard Oregonians, this risk bond study is warranted. In light of DEQ's expedient progress of their new program, DEQ is well suited to lead this effort.

I urge you to pass HB 2949, which will allow the public to understand the magnitude of the financial risk of massive uncontrolled oil releases involving spills and fires in the Portland area. Thank you for your leadership.

Sincerely,

Yumei Wang, PE, CEG, F.ASCE, Past Chair of OSSPAC

Senior Advisor on Infrastructure Resilience and Risk

Affiliate Faculty in Civil and Environmental Engineering at Portland State University