Bulk Fuel Terminal Capacity Reduction Regulations

Amendments to City Code Title 17

August 2026

THE BUREAU OF
PLANNING &
SUSTAINABILITY

Acknowledgments

Portland City Council

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HOW CAN I PARTICIPATE?

Watch the Council Committee hearing. Link to the live stream and recorded video at https://www.portland.gov/auditor/council-clerk/events.

Testify orally at the Council Committee hearing. The hearing will be held on September 16, 2026 at time 2 p.m. The hearing will be held in a hybrid format with options to participate either in person at City Hall, 1221 SW 4th Avenue, Council Chambers, or virtually using a computer, mobile device, or telephone. You must sign up in advance to testify. Registration for virtual testimony closes one hour prior to the Council meeting. In-person testifiers must sign up before the agenda item is heard. You can register online or over the phone by calling 311. The agenda and a link to the oral testimony registration will be available the Thursday before the hearing at portland.gov/auditor/council-clerk/events. Email the Council Clerk with questions at councilclerk@portlandoregon.gov.

Submit written testimony. We encourage electronic written testimony via the Map App, but written testimony can also be submitted via U.S. Mail. Written testimony must be received by the time of the hearing and must include your name. If you wish to receive mailed notice with project updates, you must include your mailing address.

Testimony via the Map App:

portlandmaps.com/bps/mapapp
Click on "Bulk Fuel Terminal Capacity Reduction Regulations" then click the "Testify" button.

Testimony via U.S. Mail:

Bureau of Planning and Sustainability
BFT Capacity Reduction Regulations
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Portland, OR 97201

What happens next?

After the Bulk Fuel Terminal (BFT) Capacity Reduction Regulations have been reviewed by the Portland City Council Committee, the full City Council will hold a hearing, consider public testimony and then vote on whether to adopt the changes.

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Section 1 – Introduction

The Draft Bulk Fuel Terminal (BFT) Capacity Reduction regulations propose new regulations based on the Critical Energy Infrastructure (CEI) Hub Policy Project's concept of requiring a 20 percent storage tank capacity reduction ("drawdown") by 2036. The purpose of the proposed regulations is to further support risk reduction and management in the CEI Hub where large volumes of bulk fuel storage are located in an area of natural hazards.

The Draft BFT Capacity Reduction Regulations will be a new chapter within City Code Title 17, Public Improvements. Regulations include:

- Storage capacity reduction requirements: Terminals must reduce their storage capacity by at least 20 percent by December 1, 2036.
- Inventory requirements:
    - Terminals must provide a January 1, 2027 inventory of existing tanks and capacity. This inventory will serve as the basis for calculating the required 20 percent capacity reduction in 2036.
    - Terminals must provide a December 1, 2036 inventory of in-service tank capacity and documentation showing compliance with the required capacity reduction.
- Review and compliance processes and a penalty structure.

Read the Draft BFT Capacity Reduction Regulations in Section 2.

Regulatory Objective

The Draft BFT Capacity Reduction Regulations balance the need to reduce risk associated with storing fuel in a natural hazard area with the need to allow for the continued supply of Oregon's fuel. Together with State requirements for seismic upgrades at bulk fuel terminals and the City's proposed Title 33 zoning code amendments limiting expansions of storage capacity and transloading infrastructure, these regulations can help reduce potential risks associated with the CEI Hub and support increased safety, community resilience, and environmental resilience.

The fuel storage reduction percentage specified in these regulations is based on the City's understanding of existing storage capacity across the 11 terminals in the CEI Hub and how fuel demand is projected to change over time. Fuel demand modeling conducted by Parametrix Consulting (Parametrix), on behalf of the City, projects that liquid fuel demand will remain relatively stable in the near-term before declining in the long term (see Appendix A). Using the model's "Delayed Progress" scenario, BPS evaluated projected fuel demand in relation to the CEI Hub's estimated operational capacity and annual throughput capacity to determine whether the proposed capacity reduction could continue to accommodate Oregon's future fuel needs. Under the model's current assumptions, including a conservative estimate of 12 tank turns per year, the proposed 20 percent capacity reduction results in an estimated storage utilization rate of approximately 96 percent in 2036, the proposed compliance year. While this represents a relatively high utilization rate, the model indicates that projected fuel demand can continue to be accommodated under the proposed reduction. The model also indicates that utilization would decrease beyond 2036 as statewide fuel demand continues to decline.

The results of the Parametrix modeling are also generally consistent with state and federal fuel demand forecasts. Long range projections from the US Energy Information Administration (EIA), and the Oregon Department of Energy (ODOE) technical report project declining liquid fuel consumption through 2050.

Similarly, the Oregon Office of Economic Analysis (OEA) Clean Fuels Forecast and the Oregon Department of Transportation (ODOT) Revenue Forecast show shorter term declining liquid fuel consumption through 2035. These forecasts reinforce that statewide liquid fuel demand is not projected to exceed historic peak consumption rates and support the conclusion that the proposed reduction in storage capacity is not expected to adversely affect fuel supply. Additional information regarding the Parametrix modeling and state and federal fuel demand projections is provided in the *Fuel Demand* section below.

The 2036 fuel storage capacity reduction target date was selected to align with the Oregon Department of Environmental Quality's (DEQ's) Fuel Tank Seismic Stability (FTSS) program requirements. The FTSS program requires bulk fuel terminals to complete seismic upgrades within 10 years of their approved Risk Mitigation Implementation Plans (RMIPs), with those plans anticipated to be finalized and approved by DEQ Aligning the City's capacity reduction target date with DEQ's program allows bulk fuel terminals to account for both the state required seismic upgrades and the City of Portland Title 17 required capacity reductions in their long-term planning and investments. Additional details on the FTSS program are provided in Section 3 below.

Lastly, given the uncertainty surrounding future liquid fuel demand and infrastructure needs, the Title 17 regulations do not identify reduction targets beyond 2036. The Bureau of Planning and Sustainability will report to City Council in 2028, 2031 (4-year) and 2036 on RMIPs, updated fuel demand projections, and the fuel reduction program.

Background

The CEI Hub is a six-mile stretch of land in northwest Portland located along the Willamette River. It contains facilities that store and distribute fuels as part of a supply chain critical to Oregon's fuel infrastructure, with more than 90% of the state's liquid fuel supply stored at and passing through the CEI Hub via pipeline, barge, or rail.

Numerous studies have found that the concentration of bulk fuel terminals in the CEI Hub presents significant risks, primarily due to the CEI Hub's location on land with a high risk of liquefaction. In the event of a major earthquake, particularly a Cascadia Subduction Zone (CSZ) event, storage tanks in the CEI Hub are at risk of failure, releasing fuel and other hazardous materials. Such a disaster would pose serious threats to human health and to the environment, including waterways, air quality, and adjacent natural areas. In addition to the risks posed to human health and the environment, a 2023 report published by Multnomah County found that the estimated clean-up costs associated with such an event are likely in the range of $196 million to $2.1 billion.

Additionally, in an acknowledgement of risks from bulk fuel terminals statewide, in 2022 the State of Oregon enacted Senate Bill 1567 and gave the Oregon Department of Environmental Quality (DEQ) the authority to establish the Fuel Tank Seismic Stability (FTSS) Program. This program requires bulk fuel storage facilities to develop risk mitigation implementation plans (RMIPs) to strengthen seismic resilience of facilities and minimize risk of damage to employees, surrounding communities and the environment. Read more about DEQ's FTSS program and hazard issues in Section 3 of this report.

There are currently eleven bulk fuel terminals in the CEI Hub (Map 1). According to various sources from the county and state, the City estimates that these terminals collectively have a storage capacity of 396 million gallons (Table 1), of which 308 million gallons is in-service storage capacity for liquid fuel or fuel related products (Table 2). Individual terminals range in capacity from about 7 million to 70 million gallons, with most having more than 20 million gallons of storage capacity. In addition to liquid fuels, the

CEI Hub also contains a liquid natural gas facility and facilities producing other non-fuel materials. These estimates are based on the best available information at the time of publication and may be updated as new information becomes available.

Table 1. Estimate Capacity by Tank Service Status at Bulk Fuel Terminals in the CEI Hub

BULK FUEL TERMINALS	**Total Tank Capacity**	Out of Service Tank Capacity	In Service Tank Capacity
Petroleum Fuels			
Kinder Morgan - Linnton	20,205,891	6,222,800	13,983,091
TransMontaigne	24,661,599	-	24,661,599
NuStar/Sunoco/Shore Terminals	52,920,590	1,971,976	50,948,614
Pacific Terminal Services	11,680,305	20,941	11,659,364
Kinder Morgan - Willbridge	71,479,929	8,423,141	63,056,788
Chevron USA Inc	47,757,067	474,268	47,282,799
Phillips 66 Company	30,329,641	5,030,521	25,299,120
Zenith Energy Terminals	68,002,234	3,788,568	64,213,666
McCall Oil	38,706,259	-	38,706,259
Shell Oil/Triton West	22,716,456	-	22,716,456
Total	388,459,971	25,932,215	362,527,756
Gaseous Fuels			
NW Natural Gas Co	7,375,487	-	7,375,487
Total	7,375,487	-	7,375,487
Total Fuel	**395,835,458**	**25,932,215**	**369,903,243**

Source: BPS Analysis using data estimates from Multnomah County, DEQ and EPA.

Map 1. CEI Hub with Existing Bulk Fuel Terminals

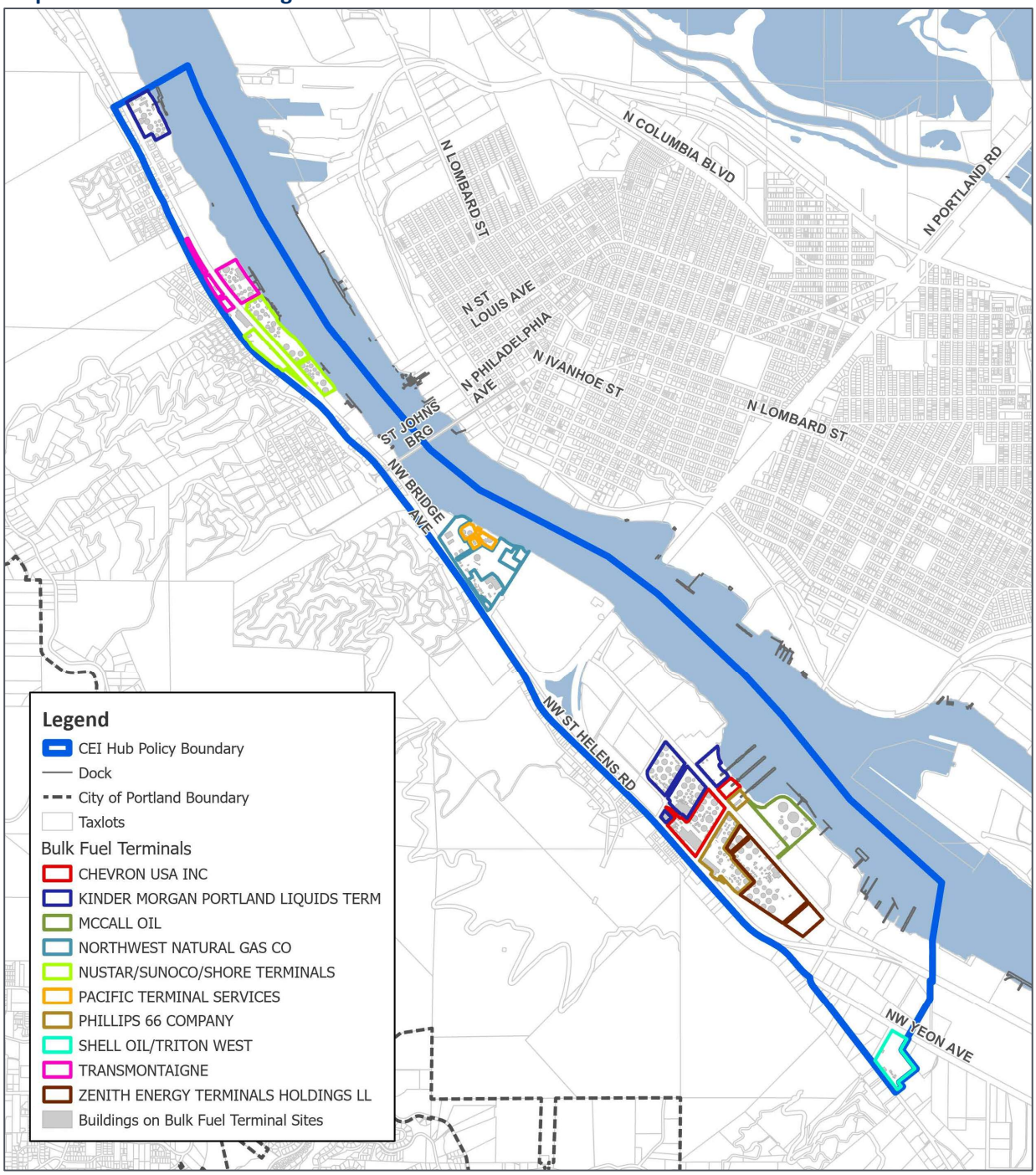


Table 2. Estimated In-Service Capacity by Tank Contents at the Bulk Fuel Terminals in the CEI Hub

BULK FUEL TERMINALS	**In Service Tank Capacity**	In Service *Fuel*	In Service *Non-Fuel or Unknown**
Petroleum Fuels			
Kinder Morgan - Linnton	13,983,091	13,823,155	159,936
TransMontaigne	24,661,599	23,231,771	1,429,828
NuStar/Sunoco/Shore Terminals	50,948,614	50,948,614	-
Pacific Terminal Services	11,659,364	11,659,364	-
Kinder Morgan - Willbridge	63,056,788	62,362,864	693,924
Chevron USA Inc	47,282,799	37,376,500	9,906,299
Phillips 66 Company	25,299,120	21,677,958	3,621,162
Zenith Energy Terminals	64,213,666	48,787,570	15,426,096
McCall Oil	38,706,259	15,754,368	22,951,891
Shell Oil/Triton West	22,716,456	22,151,136	565,320
Total	362,527,756	307,773,300	54,754,456
Gaseous Fuels			
NW Natural Gas Co	7,375,487	7,375,487	-
Total	7,375,487	7,375,487	-
Total Fuel	**369,903,243**	**315,148,787**	**54,754,456**

**Non-fuel contents primarily include asphalt, water, wastewater, lubricants and motor oils. Unknown contents account for about 2.6 million gallons.*

Source: BPS Analysis using data estimates from Multnomah County, DEQ and EPA.

Community Engagement

The Draft BFT Capacity Reduction Regulations are a result of engagement and community feedback heard as part of the related but separate work of the CEI Hub Policy Project in 2025, which involves Comprehensive Plan and zoning code changes. During the CEI Hub Policy Project's development a concept for a 20 percent reduction ("drawdown") in overall storage capacity at the CEI Hub was proposed to support further reducing and managing risk and related impacts from the terminals in the CEI Hub.

BPS staff published a discussion draft of the BFT Capacity Reduction Regulations in early June 2026. Staff conducted community engagement in June 2026, which included:

- An **online Map App** with project information, portal to provide comments and opportunity to view the comments of others.
- Two **online information sessions** for the public to learn more and ask questions. One will be scheduled during the workday and the other in the evening.
- A **focused informational meeting** with community and environmental organizations that were engaged in the CEI Hub Policy Project drafts.
- Presentations to groups as invited and available.

- A **project email** through which questions or comments can be sent to staff.
- A **project website** provides an overview of the Draft BFT Capacity Reduction Regulations and links to extensive background information provided during the development of related CEI Hub Policy Project that proposes Comprehensive Plan and zoning code amendments.

Comments received during this phase were reviewed and considered by BPS staff for possible revisions to the draft regulations.

Section 2 – Amendments to Title 17, Public Improvements

The following amendments create a new Chapter 112 in Title 17, Public Improvements, to implement new requirements for a reduction in bulk fuel terminal storage capacity.

New chapter – 17.112 Bulk Fuel Terminal Capacity Reduction Regulations

17.112.005 Short title
17.112.010 Purpose
17.112.020 Definitions
17.112.030 Authority
17.112.040 Confidential or Proprietary Information
17.112.050 Bulk Fuel Terminal Capacity Reduction Regulations
17.112.060 Exemptions
17.112.070 Inventory and Reporting Requirements
17.112.080 Compliance and Verification
17.112.090 Administration Fees
17.112.100 Enforcement and Notice of Violation
17.112.110 Penalties
17.112.120 CEI Hub Mitigation Improvement Fund
17.112.130 Debt and Collection

17.112.005 Short Title.

This Chapter is known as the Bulk Fuel Terminal Reduction Regulations or BFT Reduction Regulations.

17.112.010 Purpose.

The purpose of this Chapter is to reduce the fuel storage capacity at bulk fuel terminals to support natural hazard risk reduction, community safety, and resilience at the Critical Energy Infrastructure Hub in northwest Portland.

17.112.020 Definitions.

For purposes of Chapter 17.112 and rules adopted under it, the following terms are understood to have the meanings specified in this Section:

A. Administrative rule means all rules promulgated under Section 17.112.030 of this Chapter.

B. Aviation Fuel is a specialized type of fuel that is a highly refined petroleum product formulated to power aircraft engines. Aviation fuel includes jet fuel, aviation gasoline (or "avgas") and sustainable aviation fuel (SAF).

C. Bulk fuel terminal means an establishment that is primarily engaged in the transport and bulk storage of fuels. Bulk fuel terminals have access to marine, railroad, or regional pipeline that transport fuels to or from the site. Bulk fuel terminals either have transloading facilities for transferring a shipment between transport modes or have transloading facilities and storage tank capacity exceeding 2 million gallons. Terminal activities can also include fuel blending, regional distribution, and wholesaling.

The following facilities are not considered bulk fuel terminals for the purposes of this Chapter:

1. Truck or marine freight terminals that do not store, transport or distribute fuels.

2. Truck or marine freight terminals that have storage capacity of 2 million gallons or less, unless they have multiple fuel storage facilities, each with 2 million gallons of fuel storage capacity or less but cumulatively having a fuel storage capacity in excess of 2 million gallons, and being located on separate parcels of land but having two or more of the following:

a. The facilities are located or will be located on one or more adjacent parcels of land. Adjacent includes separated by a shared right-of-way;

b. The facilities share or will share operating facilities such as driveways, parking, piping, or storage facilities; or

c. The facilities are owned or operated by a single parent partnership or corporation.

3. Gasoline stations and other retail sales of fuels.

4. Distributors and wholesalers that receive and deliver fuels exclusively by truck.

5. Industrial, commercial, institutional, and agricultural firms that exclusively store fuel for use as an input.

6. Uses that involve the transfer or storage of solid or liquid wastes.

7. The storage of fuels at an airport, surface passenger terminal, marine, truck or air freight terminal, drydock, ship or barge servicing facility, rail yard, or as part of a fleet vehicle servicing facility is not a bulk fuel terminal when the fuel will be used for fueling that occurs exclusively at the facility or on the site where the fuel is stored.

8. Uses that recover or reprocess used petroleum products are not bulk fuel terminals.

D. Bulk fuel terminal owner or responsible party means any person, corporation, operator, lessee, or other legal entity that owns, leases, or operates a bulk fuel terminal, as defined in Subsection 17.112.020 C.

E. Bulk fuel terminal site means one or more parcels in common ownership, or that share facilities and are adjacent, that are used for bulk fuel terminal activities, as defined in Subsection 17.112.020 C.

F. Bureau means the Bureau of Planning and Sustainability.

G. Fuel means material used to produce energy by burning, such as for heat or power. Fuels include, but are not limited to, gasoline, diesel, ethanol, biodiesel, renewable diesel, crude oil, jet fuel, avgas, liquefied natural gas, methanol, biomethane, clean hydrogen, naphtha, propane, fuel oil, and fuel additives. Materials that are not considered fuel but are commonly stored at bulk fuel terminals include, but are not limited to, water, wastewater, asphalt, lubricants and motor oils.

H. In-service storage tank means a tank that meets all the following conditions: 1) is connected to transloading facilities, 2) has undergone the inspections required by American Petroleum Institute (API) Standard 653 within the applicable inspection intervals, and 3) has been determined to be fit for

continued service based on its most recent API 653 inspection. In-service storage tanks include storage tanks that are undergoing seismic retrofitting, maintenance, inspections, or other repairs.

I. Out-of-service storage tank means any storage tank that does not meet the definition of in-service storage tank as defined in Subsection 17.112.020 H.

J. Reduce means decreasing the total storage tank capacity at a terminal by taking storage tanks out-of-service as defined in Subsection 17.112.020 I.

K. Regulated public utility as defined by ORS 757.005 means any corporation, company, individual, association of individuals, or its lessees, trustees or receivers, that owns, operates, manages or controls all or a part of any plant or equipment in this state for the production, transmission, delivery or furnishing of heat, light, water or power, directly or indirectly to or for the public, whether or not such plant or equipment or part thereof is wholly within any town or city.

L. Storage tank means an above ground container designed and used for the storage of materials.

M. Storage tank capacity refers to the total internal volumetric capacity of a storage tank based on the tank's physical dimensions and shell geometry. This is also known as the shell capacity of a storage tank.

N. Throughput refers to the quantity of fuel, in gallons, that has passed through storage tanks at a bulk fuel terminal over a specified period of time.

O. Transloading facility means facilities located on the site of a bulk fuel terminal that facilitates the transfer of fuel between different modes of transportation such as between pipelines, railcars, trucks and ships/barges. The transloading facilities include:

1. Loading racks;
2. Loading arms and flexible hoses;
3. Pumps;
4. Piping to transport fuel within the facility; and
5. Integrated units that include pumps, valves, meters, grounding equipment, filtration, instrumentation, and control systems for transfer operations.

17.112.030 Authority.

A. The City Administrator is authorized to administer the provisions of this Chapter.

B. The City Administrator may, upon request, issue written interpretations of how this Chapter applies in general or to specific circumstances.

C. The City Administrator is authorized under Portland City Code Chapter 1.05, Administrative Code, to adopt, amend, and repeal administrative rules, procedures, and forms to implement the provisions of this Chapter.

17.112.040 Confidential or Proprietary Information

If any bulk fuel terminal owner or responsible party is required by this Chapter to provide inventories, facility and tank records, books, diagrams, plans, or other documents to the City that the bulk fuel terminal owner or responsible party reasonably believes to be confidential or proprietary, the City will take reasonable steps to protect the confidential or proprietary nature of the documents to the extent

authorized by the Oregon Public Records Law, provided that all documents are clearly marked as confidential by the bulk fuel terminal owner or responsible party at the time of disclosure to the City. The City will not be required to incur any costs to protect such documents, other than the City's routine internal procedures for complying with the Oregon Public Records Law.

17.112.050 Bulk Fuel Terminal Capacity Reduction Regulations.

A. Scope. The Bulk Fuel Terminal Reduction regulations of this Chapter apply to all bulk fuel terminals.
B. Bulk Fuel Storage Capacity Reduction. By December 1, 2036, the total amount of in-service fuel storage tank capacity at a bulk fuel terminal must be reduced by at least 20 percent below the in-service fuel storage tank capacity that existed on January 1, 2027, as documented in a storage tank capacity inventory as required in Section 17.112.070. Any capacity above what was included in the baseline inventory that is legally brought back into service must be added to the total in-service capacity that needs to be reduced.

C. Out-of-service tanks. To comply with the requirements of this Chapter, fuel storage tanks that are out-of-service as of December 1, 2036, are prohibited from becoming in-service fuel storage tanks, as defined under Subsection 17.112.020 H. In addition, the following must be documented for all out-of-service tanks:

a. All liquid and sludge have been removed from the tank and its connecting piping; and
b. All transloading facilities have been disconnected from the tank, and all valves, except for ventilation valves, have been closed and locked.

D. Reporting. The terminal owner or responsible party must submit all required documentation to the Bureau in accordance with the provisions of Section 17.112.070, Inventory and Reporting Requirements, and any applicable administrative rules.

E. Failure to comply. A bulk fuel terminal that does not achieve the required reduction of in-service fuel storage tank capacity by December 1, 2036, is in violation of this Chapter and shall be subject to enforcement procedures under Section 17.112.100 and penalties under Section 17.112.110 C.

F. Additional regulations. Compliance with this Chapter does not exempt the bulk fuel terminal from any other requirements of Portland City Code, including Title 24 Building Regulations, or Title 33 Planning and Zoning.

17.112.060 Exemptions.

The requirements of Section 17.112.050, Bulk Fuel Terminal Capacity Reduction Regulations, do not apply in the following situations:

A. A regulated public utility as defined in Subsection 17.112.020 K.

B. Tanks used exclusively as "surge" or "breakout" tanks associated with an interstate pipeline and regulated by the Federal Pipeline and Hazardous Materials Safety Administration's Office of Pipeline Safety.

C. In-service storage tanks that exclusively store aviation fuel as of January 1, 2027, and documented per the requirements of Subsection 17.112.070 A.

D. Additional storage capacity approved through a Title 33 Fuel Storage Tank Capacity Transfer Review or Aviation Fuel Storage Expansion Review.

17.112.070 Inventory and Reporting Requirements.

A. 2027 Baseline Inventory Requirement. By March 31, 2027, each bulk fuel terminal must submit to the Bureau an inventory of all storage tanks that existed on the bulk fuel terminal site on January 1, 2027. The inventory will be used to determine the total storage tank capacity, including identifying the total in-service and out-of-service fuel storage capacity and the total in-service and out-of-service non-fuel storage capacity for the bulk fuel terminal site, as defined by Section 17.112.020.

1. The baseline inventory must include all information required by this Chapter and any administrative rules.

2. The total fuel storage capacity in the baseline inventory will serve as a baseline for tracking terminal capacity and compliance with the provisions of this Chapter.

3. The baseline inventory must include the following components:

a. A site plan showing the location of all storage tanks located on the bulk fuel terminal site, with each tank labeled with an identification number;

b. A table listing each storage tank by its identification number with the following information for each tank:

(1) The maximum operating capacity;
(2) The maximum shell capacity;
(3) The type of storage tank (fixed-roof, external floating roof, or internal floating roof);
(4) The in-service or out-of-service status, as defined in Section 17.112.020;
(5) The type of product stored in the tank; and
(6) Whether the product stored is a fuel product as defined by Subsection 17.112.020.G.

c. A table listing the monthly total throughput and average and peak tank fill levels by fuel type for every month from January 2024 through December 2026.

d. Supporting evidence substantiating the information reported in the inventory table, including but not limited to:

(1) Visual documentation demonstrating physical characteristics of storage tanks such as:
  (a) dated photographs,
  (b) engineering drawings, or
  (c) stamped tank specification plates, providing evidence of tank dimensions, storage capacity, or operational status;
(2) Third-party certified documents such as:
  (a) Spill Prevention, Control and Countermeasure (SPCC) plans required by the U.S. Environmental Protection Agency (EPA) and certified by a licensed professional engineer;

(b) Inspection reports or other documentation prepared under applicable American Petroleum Institute (API) standards and bearing engineer certification;
(c) Oregon Department of Environmental Quality (DEQ) air quality permits; and
(d) DEQ Seismic Vulnerability Assessments (SVAs) or Risk Mitigation Implementation Plans (RMIPs) submitted to and accepted by the Oregon Department of Environmental Quality.

B. Interim Inventory Requirements

1. Terminals must submit an interim inventory report by March 31, 2030 and March 31, 2033. The inventory reports must document all storage tanks that existed on the terminal as of January 1, 2030 and January 1, 2033, respectively.

2. The interim inventory must include all information required by this Chapter and any administrative rules.

3. The interim inventory must include the following components:

a. A site plan showing the location of all storage tanks located on the bulk fuel terminal site, with each tank labeled with an identification number;

b. A table listing each storage tank by its identification number with the following information for each tank:

(1) The maximum operating fuel storage capacity;
(2) The maximum shell fuel storage capacity;
(3) The type of storage tank (fixed-roof, external floating roof, or internal floating roof);
(4) The in-service or out-of-service status, as defined in Section 17.112.020;
(5) The type of product stored in the tank;
(6) The monthly total throughput of product stored in the tank for every month from January 2024 through December 2026; and
(7) Whether the product stored is a fuel product as defined by Subsection 17.112.020 G.

c. A table listing the monthly total throughput, and both average and peak tank fill levels by fuel type for every month from the date of the most recently submitted inventory to the date of submittal outlined in Section B.2

d. Supporting evidence substantiating the information reported in the inventory table, including but not limited to:

(1) Visual documentation demonstrating physical characteristics of storage tanks such as:
(a) dated photographs,
(b) engineering drawings, or
(c) stamped tank specification plates, providing evidence of tank dimensions, storage capacity, or operational status;
(2) Third-party certified documents such as:
(a) Spill Prevention, Control and Countermeasure (SPCC) plans required by the U.S. Environmental Protection Agency (EPA) and certified by a licensed professional engineer;

(b) Inspection reports or other documentation prepared under applicable American Petroleum Institute (API) standards and bearing engineer certification;
(c) Oregon Department of Environmental Quality (DEQ) air quality permits; and
(d) DEQ Seismic Vulnerability Assessments (SVAs) or Risk Mitigation Implementation Plans (RMIPs) submitted to and accepted by the Oregon Department of Environmental Quality.

C. 2036 Reduction Inventory Requirement

1. By December 31, 2036, each bulk fuel terminal must submit to the bureau an updated inventory of all storage tanks that existed on the bulk fuel terminal site on December 31, 2036. The updated inventory must show the required storage capacity reduction, consistent with Section 17.112.050.

2. The 2036 reduction inventory must include all information required by this chapter and by any administrative rules.

3. The updated inventory must include all of the components of the baseline inventory as required by Section 17.112.070 with the updated information reflecting site conditions on December 1, 2036. In addition, the updated inventory must include:

a. A calculation demonstrating the total quantity of storage and percent change in in-service fuel storage capacity subject to the reduction requirements, excluding any storage tanks that are exempt from the reduction regulations under Section 17.112.060; and

b. A written explanation describing how the bulk fuel terminal achieved the required reduction, including identification of the specific storage tanks that were taken out of service.

4. If the terminal owner or responsible party fails to submit an inventory by the required deadlines, the City Administrator will initiate enforcement and assess penalties pursuant to Section 17.112.100 and Section 17.112.110

5. The bulk fuel terminal owner or responsible part is responsible for the accuracy of all information submitted to satisfy these requirements.

6. The City Administrator will maintain on file, and make available to the public, all documentation described in Section 17.112.070, excluding any confidential information as defined in Section 17.112.040.

7. The City Administrator will provide notification to each bulk fuel terminal owner or responsible party at least six months prior to December 1, 2036, reminding the terminals of the compliance deadlines established in Section 17.112.050.

17.112.080 Administration Fees.

A. A fee of $10,000 is required for the processing and verification of the inventory and reporting per Section 17.112.070 and must be submitted to BPS for these purposes at the time of each submittal. This fee will be increased or decreased each year on July 1. The change will occur automatically, and the new fee amount will be placed in Title 17 without being subject to the procedures for amending Title 17. The change will be based on the Consumer Price Index for All Urban Consumers (CPI-U), established by the U.S. Bureau of Labor Statistics.

B. The inventory submittal will not be considered complete if it does not include the submittal fee.

17.112.090 Compliance and Verification.

A. Check for completeness. Upon receipt of an inventory submittal required by Section 17.112.070, the Bureau will review the inventory to ensure it contains all of the elements and documentation required by Section 17.112.070.

1. The Bureau will determine completeness within 21 days of receipt of inventory documentation.

2. If the Bureau determines that the inventory documentation is not complete, the Bureau will notify the bulk fuel terminal owner or responsible party of any missing materials.

3. The bulk fuel terminal owner or responsible party has 14 days from the date of the Bureau's notification to provide the missing information. Failure to provide a complete inventory within 14 days of receipt of the Bureau's notification constitutes a violation of this Chapter and subjects the terminal owner or responsible party to enforcement procedures described in Section 17.112.100 and penalties under Section 17.112.110.

B. Review. Following the determination that the inventory submittal materials are complete, the Bureau will review the information to verify the inventory. Upon completion of the inventory verification review, the Bureau will either issue a preliminary letter of inventory verification or a notice of discrepancy.

1. If the Bureau cannot verify the inventory in the review period, the Bureau will issue a notice of discrepancy, describing the discrepancy and identifying the additional information or corrective actions required to resolve it.

2. Failure to resolve the discrepancy within 30 days of the date of notice of discrepancy constitutes a violation of this Chapter and subjects the bulk fuel terminal owner or responsible party to enforcement procedures described in Section 17.112.100 and penalties as authorized under Section 17.112.110.

3. If the terminal resolves the discrepancy and provides documentation of resolution within 30 days of the date of notice, the Bureau will issue a preliminary letter of inventory verification to the bulk fuel terminal owner or responsible party indicating that the Bureau has tentatively verified the inventory. The preliminary letter of inventory verification will include a description of the discrepancy and how it was resolved.

C. Public comment period. Once the Bureau issues a preliminary inventory verification, the Bureau will make the letter and verified inventory available for public review, excluding any confidential information described in Section 17.112.040. The Bureau will open a 30-day public comment period beginning on the date the preliminary letter of inventory verification is posted.

D. Determination. Following the closure of the 30-day public comment period, the Bureau will consider comments and make a determination on the inventory.

1. If no discrepancies are identified, the Bureau will issue a final letter of inventory verification. This letter will establish the terminal's total in-service fuel storage capacity as documented under Section 17.112.070.

2. If a discrepancy is identified, the Bureau will issue a notice of discrepancy to the bulk fuel terminal owner or responsible party, following processes in Subsection 17.112.090 B.

E. Appeals. The Bureau's determination may be appealed by the bulk fuel terminal owner or responsible party and any person adversely affected or aggrieved by the decision to the Code Hearings Officer within 10 days, as provided for in Chapter 22.10 of Portland City Code. The appeal fee shall be 50 percent of the inventory reporting submittal fee per Section 17.112.080, Administration Fees and must be submitted to BPS when the appeal is filed.

17.112.100 Enforcement and Notice of Violation.

A. The Bureau, upon determining that a violation of this Chapter or associated administrative rules has occurred, will issue a written notice of the violation by certified mail to the bulk fuel terminal owner or responsible party. The notice will identify the violation and applicable penalty.

B. A bulk fuel terminal owner or responsible party must, upon receipt of a notice of violation, take action to correct the violation and pay to the City the accumulated daily penalty, or appeal the finding of a violation to the Code Hearings Officer within 10 days of receipt of the notice.

C. A violation issued pursuant to Subsection 17.112.100 A. may be appealed to the Code Hearings Officer, as provided for in Chapter 22.10 of Portland City Code. The appeal fee shall be 50% of the inventory reporting submittal fee per Section 17.112.080, Administration Fees and must be submitted to BPS when the appeal is filed.

17.112.110 Penalties.

A. The City Administrator may impose penalties/fines on any bulk fuel terminal owner or responsible party, who fails to comply with the requirements of this Chapter or who has misrepresented any material fact in a document or evidence required to be prepared or submitted by this Chapter.

B. A terminal served with a notice of violation of the reporting and inventory requirements of this Chapter will be subject to a daily penalty, starting from mailing date of the notice, of $12,000 for the first 30 days of the violation, subsequent days will be subject to a daily penalty of $24,000 until the violation has been documented to be remedied and the rules of this Chapter met.

C. A terminal served with a notice of violation of the bulk fuel terminal capacity reduction regulations of this Chapter, Section 17.112.050, will be subject, starting from mailing date of the notice, to a $0.25 per gallon daily penalty for every gallon not drawn down until the violation has been documented to be remedied and the rules of this Chapter met.

D. The filing of an appeal on the finding of violation will stay the application of the daily penalties between the date an appeal is filed and the date a decision is made on the by the Code Hearings Officer. If payment of the penalties is ordered, the payment must be received by the City Administrator or postmarked within 15 calendar days after the order becomes final.

E. If the City Administrator assesses an enforcement penalty as described in Section 17.112.110 against a bulk fuel terminal owner or responsible party, the revenue service and program of the City Administrator may file a statement that identifies the property, the amount of the penalty, and the date from which the charges are to begin. The revenue service and program of the City Administrator will then:

1. Notify the bulk fuel terminal owner or responsible party of the assessment of enforcement penalties;

2. Record a property lien in the docket of City liens;

3. Bill the bulk fuel terminal owner or responsible party monthly for the full amount of enforcement penalties owing, plus additional charges to cover the City's administrative costs; and

4. Maintain lien records until the lien and all associated interest, penalties, and costs are paid in full; and the City Administrator certifies that all violations listed in the original or any subsequent notice of violation have been corrected.

17.112.120 CEI Hub Mitigation Improvement Fund

The purpose of the CEI Hub Mitigation Improvement Fund is to support mitigation efforts in the CEI Hub that will help reduce impacts on the community, environment and economy from natural disasters.

A. Contributions. Contributions will be deposited with the City Treasurer and credited to the CEI Hub Mitigation Improvement Fund. Contributions may occur through a number of means, including:

1. Any funds received from penalties/fines collected pursuant to Section 17.112.110;

2. Funds received from grants; and

3. Other allocations.

B. Expenditures. Money in the CEI Hub Mitigation Improvement Fund may be used only as follows:

1. Risk reduction investments or emergency management activities related to the CEI Hub, including early warning systems, emergency response equipment, and water and roadway infrastructure upgrades.

2. Limited administrative costs associated with procuring equipment, personnel or planning for implementation or operation of mitigation investments or activities.

C. Administration of the CEI Hub Mitigation Improvement Fund. The CEI Hub Mitigation Improvement Fund is a sub-fund, maintained in a dedicated separate subaccount, and is independent of the general fund. Any balance in the CEI Hub Mitigation Improvement Fund will be carried forward into subsequent fiscal years.

17.112.130 Debt and Collection.

A. All fees, penalties, and interest imposed by this Chapter will be a debt due and owing to the City and may be collected by civil action in the name of the City. Payment of penalties must be made within 10 days of the date of the documented resolution of a violation. Interest will accrue at one percent per month on balances that remain unpaid as of 10 days after the date documented resolution, compounded daily from the due date.

B. Fees, penalties, and interest will be enforced and collected by the City Administrator.

Section 3 – Other Background Information

This section covers additional background context related to the bulk fuel terminals, located within the CEI Hub in northwest Portland, to which the draft BFT Reduction Regulations would apply. Brief subsections below provide further regulatory, geographic, and economic context, including high level overviews of documented natural hazards in the CEI Hub area; related risk assessment studies; DEQ's Fuel Tank Seismic Stability program; and fuel demand projections as related to the CEI Hub.

Natural Hazards

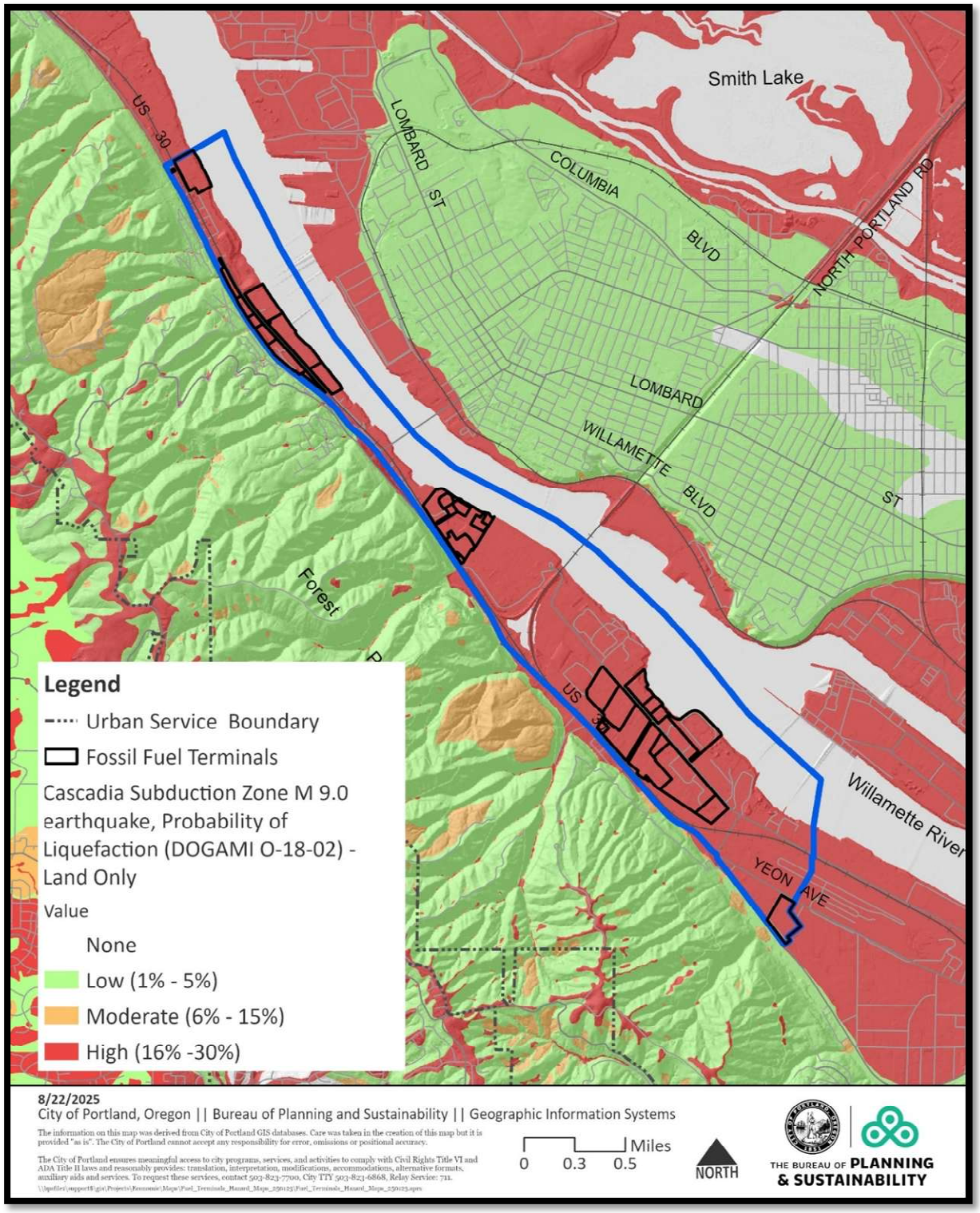
The area along the Willamette River where the CEI Hub is located is vulnerable to many natural hazards. This section provides an overview of hazards in the CEI Hub area.

Liquefaction Risk

Earthquake hazards in the state of Oregon and Pacific Northwest are well established and specific earthquake hazards related to the CEI Hub area are further documented in the 2013 *Earthquake Risk Study of Oregon's Critical Energy Infrastructure Hub*, prepared by Oregon Department of Geology and Mineral Industries (DOGAMI). In their report, Oregon DOGAMI found that the CEI Hub is located in an area where soils are largely composed of silt, river dredge material or artificial fill and are vulnerable to liquefaction risk and lateral spreading during an earthquake. While different sites may have some variation in soil types, all sites within the CEI Hub are highly vulnerable in a Cascadia Subduction Zone (CSZ) earthquake due the liquefaction hazard.

Liquefaction: According to the US Geological Survey (USGS) liquefaction takes place when "loosely packed water-logged sediments at or near the ground surface lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes." Impacts such as the ground surface subsiding, fracturing, and sliding horizontally are possible. The vulnerability to extensive impacts applies to storage tanks and land-based piping, pumps and other transloading equipment. It also extends to facilities in the river, such as docks and transloading pipes and structures.

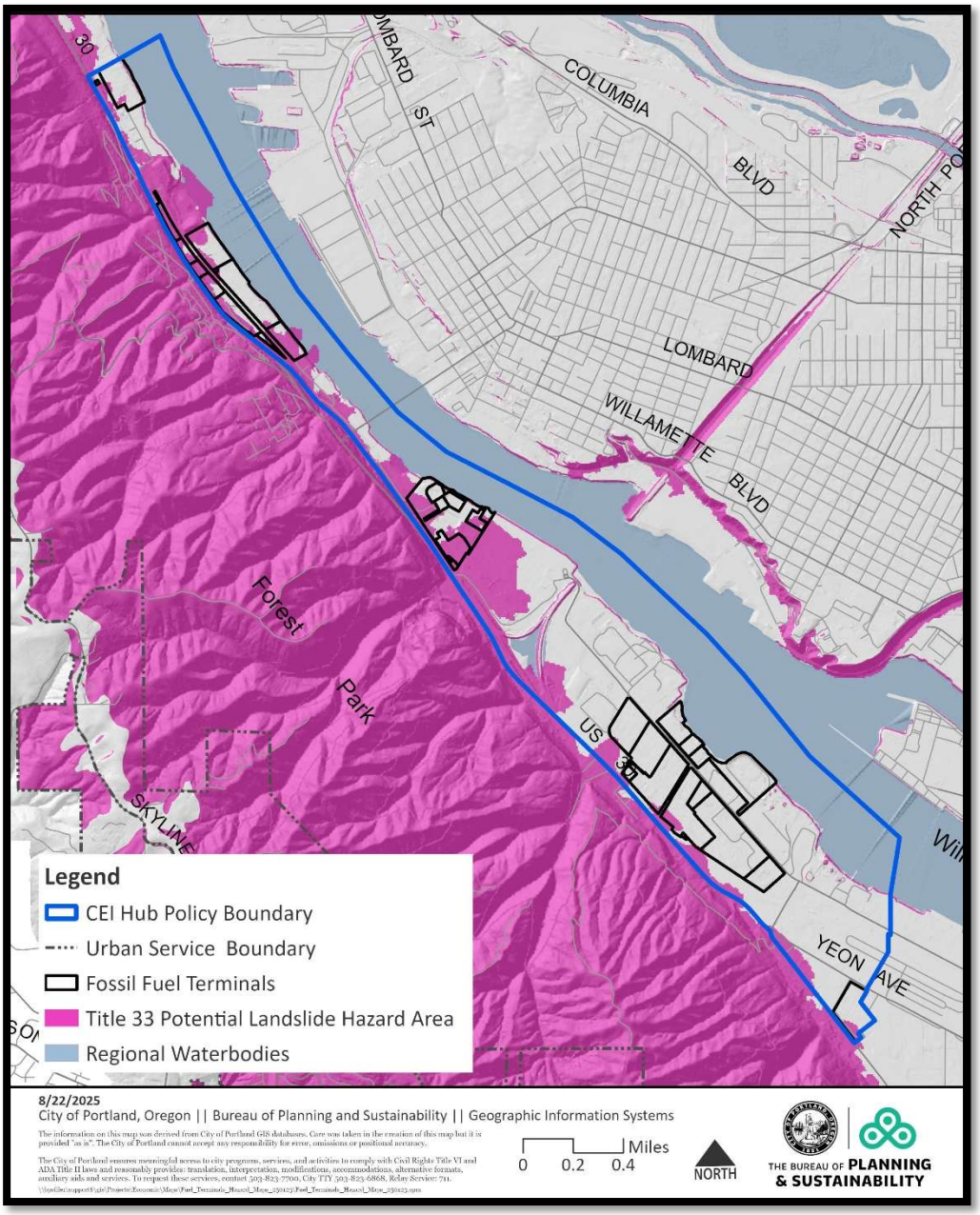
Map 1. CEI Hub Liquefaction Map



Landslide

Beyond the lateral spread or earth movement on flat areas, the hillsides adjacent to the CEI Hub are designated as a landslide hazard due to steep slopes, geology and/or historic landslide activity. Landslides can be triggered by seismic activity, heavy rainfall, or other ground disturbing activities.

Map 2. CEI Hub Landslide Hazard Map

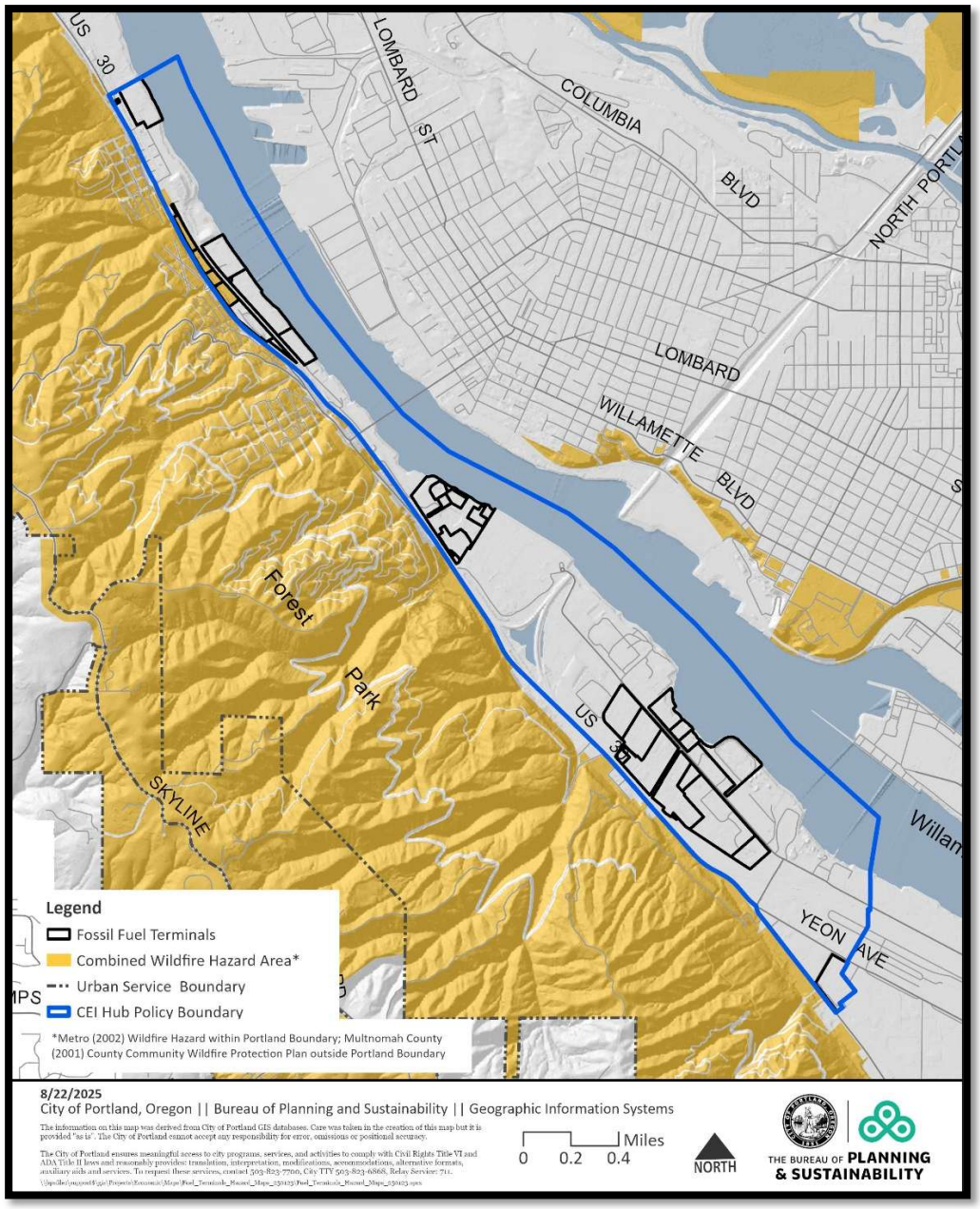


Wildfire

The area west of and adjacent to the CEI Hub is designated as a wildfire hazard area. The hazard area mainly covers the forested slopes of Forest Park but also includes residential areas. This hazard interfaces with the CEI Hub in two ways. There is the risk of wildfires that start in Forest Park spreading to the CEI

Hub causing a conflagration and there is the risk of a fire starting in the CEI Hub area spreading into Forest Park.

Map 3. CEI Hub Wildfire Hazard Map



Risk Assessment

Risk is defined as when the possibility for danger, such as the hazards noted above, intersects with something of value such as human life or environmental health. A growing understanding of the severity of the hazards and risks associated with the CEI Hub have led to many studies in recent years that further investigate and analyze the risks faced by the surrounding community, environment and region. These studies and assessments have focused on various aspects of the challenges facing this location, including

better understanding earthquake-caused fuel tank failures and vulnerability[1], level of possible fuel releases and economic impact[2], possible impacts to life safety and emergency response[3], and exploration of mitigation and risk reduction ideas[4]. These studies are part of the legislative record that can be found here. Based on information in these studies and assessments, below is a brief overview of some of the risks and issues related to the CEI Hub.

Vulnerability to hazards

According to the 2022 risk assessment report prepared for Multnomah County and the City of Portland[2], over 90% of the active fuel storage tanks in the CEI Hub were built prior to 1993, the first year that the American Society of Civil Engineers seismic design standards were required. Meaning that most of the tanks are not built to any seismic design standards and are therefore more vulnerable to failure in the event of a magnitude 8 or 9 Cascadia Subduction Zone (CSZ) earthquake. The volume of fuel stored in these tanks also adds to the vulnerability. The 2022 risk assessment report also found that there are over 600 tanks of varying sizes, "holding a combined active storage tank capacity of at least 350.6 million gallons."[2] Such large numbers amplify the vulnerability of the facilities and the impacts in the event of a CSZ earthquake.

Potential Impacts

Impacts on human health and safety: The CEI Hub is located adjacent to or near many residential areas. Impacts on these residential areas are multifaceted and would directly impact human lives in the face of a CSZ earthquake. A few of the most critical impacts and risks include exposure to toxic air, fire danger, and isolation with lack of assistance and interruption to basic needs (including water and electricity) during an emergency.

Impacts on natural resources: The CEI Hub is located between Forest Park and the Willamette River. Fuel flowing into the river as a result of tanks rupturing in a CSZ earthquake would cause substantial long-term impacts to natural systems and wildlife habitat. Similarly, a fire resulting from earthquake triggered fuel spills and spreading into the adjacent forested hills would also have significant natural resource and habitat impacts.

Impacts on local emergency response: The CEI Hub is located between Highway 30 and the Willamette River, a location with limited access, which has implications for providing emergency response to residents and businesses in the area and to the fuel tank sites in the event of a CZE earthquake. Impacts on the transportation system (roads and access) may make it hard to get in or out of the area. Impacts on other infrastructure systems in the area, such as telecommunications infrastructure (cell phone towers) and the water system (pipes), could further hinder emergency response. Beyond access, fuel spills at the CEI Hub could impact the amount of fuel, including aviation fuel, available for emergency response needs.

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[1] *Liquid Storage Tanks at the Critical Infrastructure (CEI) Hub: Seismic Assessment of Tank Inventory*, Peter Dusicka, PhD, PE and Gregory Norton, 2019

[2] *Impacts of a Cascadia Subduction Zone Earthquake on the CEI Hub*, Multnomah County Office of Sustainability and the City of Portland Bureau of Emergency Management with ECONorthwest, 2022

[3] Risk of Earthquake-Induced Hazardous Materials Release in Multnomah County, Oregon: Two Scenarios Examined, Luke Hanst, PSU, Institute for Sustainable Solutions, Oct. 2023

[4] Critical Energy Infrastructure Hub: Assessment Findings, Oregon Solutions, May 2019

Impacts on post-earthquake recovery and fuel access: The CEI Hub has a role in storing and transporting fuel for Portland and the region. Tank failures and spills along with facility and operation disruptions could also impact the availability of fuel post-disaster recovery efforts.

DEQ Fuel Tank Seismic Stability Program

BPS is coordinating with DEQ to ensure that the Bulk Fuel Storage Capacity Reduction Regulations align with and support the objectives of DEQ's Fuel Tank Seismic Stability Program (FTSS). The FTSS program requires large-capacity oil and fuel storage and distribution facilities to assess and mitigate seismic risks to their fuel tanks with the express purpose of protecting public health, life safety and environmental safety against fires and release of fuel products.

DEQ FTSS Program Specifics

Under the FTSS program, bulk fuel terminals must submit Seismic Vulnerability Assessments (SVAs) that evaluate and report the likelihood of tank failure during a major earthquake and the potential secondary impacts to employees, nearby communities, and the environment. Once SVAs are reviewed and approved by DEQ, terminals must prepare a Risk Mitigation Implementation Plan (RMIP) within six months. Each RMIP must identify the specific measures a terminal will take to reduce risk, such as tank retrofits, replacement, or containment improvements, and must be fully implemented within 10 years of DEQ's approval of the RMIP. It is expected that seismic and related safety upgrades to the terminals in the CEI Hub, guided by DEQ approved RMIPs, may be completed starting in the year 2036.

The FTSS program will not prescribe uniform mitigation measures; instead, requirements will be based on the program's performance objective and determined on a facility-by-facility basis, recognizing differences in tank design, age, and site conditions. The program's performance objective for both new and existing tanks is that the maximum allowable uncontained spill (MAUS) to the ground during a seismic event is 42 gallons per tank. New tanks built to Risk Category IV standards under the Oregon Structural Specialty Code are considered to meet this objective. DEQ has the authority to enforce compliance with these provisions and may assess penalties of up to $12,000 per day for violations.

The proposed Title 17 regulations support the goals of the FTSS program by reducing the risks posed by the storage of fuels at the CEI Hub via the 20 percent reduction of fuel storage capacity. The Title 17 regulations would become effective in 2027, aligning with the anticipated timing of the RMIP approvals for the bulk fuel terminals. The bulk fuel terminals are not required to reduce their capacity until 2036. This means that the terminals will have the ability to plan for the Title 17 fuel reductions alongside their FTSS RMIP mandated seismic upgrades in a coordinated way.

State Issues

The CEI Hub supplies fuel to roughly 90 percent of Oregon, making its vulnerabilities a statewide concern, not just an issue specific to Portland. Impacts to the CEI Hub resulting from a major disaster would disrupt fuel access across the state. While Portland can address some of the local risks, many of the significant safety and fuel resiliency challenges, such as redistributing critical fuel storage facilities to more places across the state, require state-level coordination, authority, and resources.

Consideration of bulk fuel terminal legislation has been taken up by the state in recent years. In March 2026, recognizing that natural disasters affecting bulk fuel terminals would create significant cleanup and recovery costs, the state passed a new law, **HB 4100 – Financial Responsibility,** that will require bulk fuel

terminals across the state to show they can cover the costs of oil or fuel spills. The Oregon DEQ is assigned to develop rules pertaining to certificates of financial responsibility and owners or operators must apply for a certificate of financial responsibility from the DEQ by March 31, 2027. These certificates need to be renewed every three years. The law also prevents local governments from requiring financial assurances in addition to these requirements.

In 2026 **HB 4129 – Local Preemption** was also considered but did not move forward in the Legislature. This bill sought to prohibit local governments from prohibiting or limiting the storage capacity of fossil fuel terminals.

In 2025 the following bills, none of which passed, were also considered. They reflect the type of state-led efforts that could begin to address broader risks associated with bulk fuel terminals and build a more resilient statewide fuel system.

HB 3450 – Energy Storage Transition Plan: Recognizes that Oregon's primary fuel storage is concentrated in a seismically vulnerable location. If a major earthquake strikes, much of the state's fuel infrastructure could fail. This bill directs state leaders to develop a plan for strengthening and transitioning fuel storage systems to be more resilient in the face of natural hazards, with consideration of financial assurance requirements to fund these changes.

HB 2152 – Geographic Diversity of Fuel Reserves: Addresses the over-reliance on the CEI Hub for statewide fuel reserves. By diversifying and expanding reserves across multiple locations in Oregon, this bill aims to reduce the risks posed by the Hub's concentration of fuel and ensure better emergency access in the event of a disruption.

HB 2151 – Seismic Risk Mitigation: Recognizes that implementing seismic safety requirements and emergency planning for vulnerable fuel infrastructure requires sustained funding and staffing. This bill seeks to increase resources for state programs that can mandate seismic upgrades and strengthen emergency preparedness around high-risk facilities like the CEI Hub.

The City will continue to advocate for state-led efforts, working with legislators and agencies to advance policies and investments that address these broader risks.

Fuel Demand Projections

The following state and federal analyses point to a long-run decline in liquid transportation fuels, especially motor gasoline and distillate, while electricity's share of end-use energy grows and aviation fuel demand (jet fuel) increases modestly through 2050.

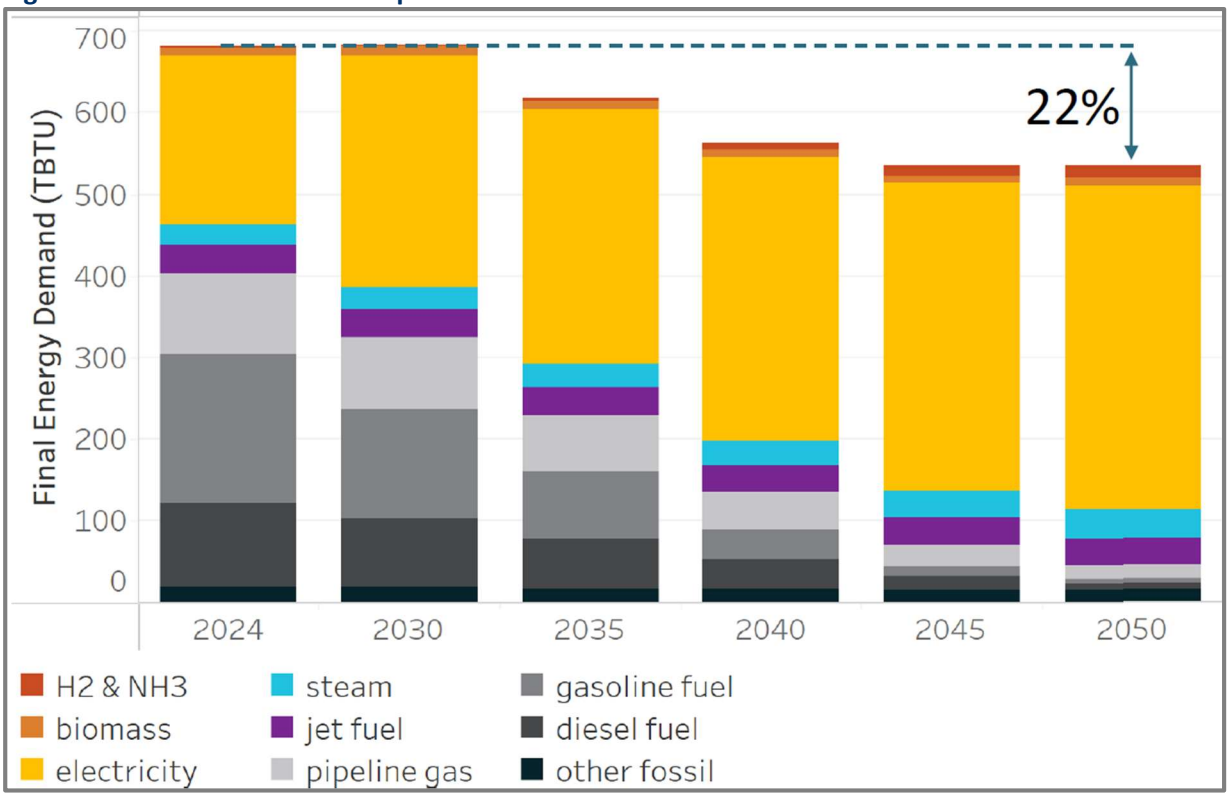
2025 Oregon Energy Strategy

As required by HB 3630, the Oregon Department of Energy (ODOE) has begun to model alternative pathways intended to identify policy options for reaching the state's clean energy goals. The model includes multiple pathways towards achieving the desired outcomes, including a reference scenario acting as the baseline (least cost) pathway. While the pathways generated by the model do include a transport and fuels sector input, the overall energy inputs considered fall under a much wider umbrella than those applicable to the CEI Hub.

The Oregon Energy Strategy Technical Report includes a broad breakdown of anticipated energy demand by sector under the reference scenario. The chart below (Figure 1), taken from the technical report, shows a projected decrease in fossil fuel demand in the reference scenario, mostly tied to electricity

demand doubling by 2050. It also shows a residual demand for jet fuel and other fossil fuels. While it is important to note that modeling done in the technical report represents the lowest-cost pathway towards achieving the State of Oregon's policy goals and is not meant to act as a demand forecast, the reference scenario does align with federal forecasts projecting a general decline in demand for liquid fuels.

Figure 1. ODOE OES Technical Report Reference Scenario



2025 Energy Information Administration Annual Energy Outlook

The US Energy Information Administration (EIA) produces the Annual Energy Outlook, which provides long-term energy projections. The 2025 edition includes projections to 2050, and reflects current trends in energy production, delivery, and consumption technology, as well as economic and demographic trends (Table 3). The report includes assumptions regarding macroeconomic growth, world oil prices, and technological progress, and shows that the US energy intensity (energy consumed per dollar of GDP) continues to decline, even as the U.S. economy continues to expand.

Petroleum and other liquids remain the most-consumed fuel in the AEO 2025 Reference case. The transportation sector is the largest consumer of petroleum and other liquids, particularly motor gasoline and distillate fuel oil (diesel). The report finds that gasoline remains the dominant light-duty vehicle (LDV) fuel, but consumption is expected to significantly decline out to 2050. Sales of conventional motor gasoline vehicles are expected to decrease through the projection period because of increasing sales of battery-electric vehicles (BEVs), hybrid-electric vehicles (HEVs), and plug-in hybrid-electric vehicles (PHEVs). Jet fuel consumption is expected to grow. This growth arises from increases in air transportation outpacing increases in aircraft fuel efficiency.

US EIA data does not report non-fossil biofuels, such as ethanol or biodiesel, separately. Total petroleum data includes the volumes of fuel ethanol and biodiesel blended with motor gasoline and distillate fuel oil, respectively.

Table 3. US Total Energy Consumption, All Sectors, Selected Sources

Select Sources	2025	2035	2050	Compound growth 2021-2050
Gasoline	16.48	13.29	9.14	-2.2%
Jet Fuel	3.57	3.81	4.39	0.9%
Distillate Fuel Oil	9.02	7.71	6.72	-1.0%
All Petroleum	37.52	33.68	30.19	-0.8%
Natural Gas	31.61	31.70	35.27	0.4%

Source: Total US energy consumption, Reference Case, 2025 AEO Table 2
(quadrillion Btu per year) https://www.eia.gov/outlooks/aeo/tables_ref.php

The EIA also divides the national forecast into regional forecasts, providing a more localized data point to compare consumption trends and forecasts closer to conditions in Oregon. Petroleum consumption in the Pacific region, defined by the EIA as Washington, Oregon, California, Alaska, and Hawaii, is forecasted to decline faster than the national forecast.
Table 4Table 4 shows that there is a significant decline in gasoline consumption and distillate fuel oil, with a more modest decline in natural gas. Jet fuel continues to be the fuel type that is forecasted to increase in demand. The Pacific region growth rate for jet fuel is higher than the national rate.

Table 4. Pacific Region, Total Energy Consumption, All Sectors, Selected Sources

Select Sources	2025	2035	2050	Compound growth 2021-2050
Gasoline	2.196	1.483	0.876	-3.5%
Jet Fuel	0.894	0.967	1.117	1.7%
Distillate Fuel Oil	1.221	1.084	0.978	-0.7%
All Petroleum	5.095	4.212	3.658	-1.2%
Natural Gas	3.109	3.258	3.075	-0.3%

Total energy consumption, Pacific region, Reference Case, 2025 AEO Table 2.9
(quadrillion Btu per year) https://www.eia.gov/outlooks/aeo/tables_ref.php

Table 5. Oregon, Calculated Total Energy Consumption, All Sectors, Selected Sources

Select Sources	2023	2035	2050	Compound growth 2021-2050
Gasoline	0.163	0.106	0.074	-3.5%
Jet Fuel	0.030	0.037	0.047	1.7%
Distillate Fuel Oil	0.102	0.937	0.844	-0.7%
All Petroleum	0.345	0.298	0.249	-1.2%
Natural Gas	0.327	0.315	0.301	-0.3%

BPS calculation based on 2025 AEO Pacific Region Reference Case and US EIA 2023 State Energy Data System (SEDS) (quadrillion Btu per year) https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf

Parametrix Fuel Forecast Findings

To translate statewide fuel demand projections into CEI Hub specific storage needs, the City contracted with Parametrix Consulting (Parametrix) to evaluate how projected changes in Oregon's fuel demand would affect future use of existing fuel storage capacity at the CEI Hub. Unlike statewide fuel demand forecasts prepared by the Oregon Department of Energy (ODOE) and the U.S. Energy Information Administration (EIA), the Parametrix model directly relates projected Oregon fuel demand to the existing storage capacity at the CEI Hub. This allows the City to evaluate whether existing storage capacity will be sufficient under a range of future fuel demand scenarios, based on the assumption that approximately 90 percent of Oregon's liquid fuel is supplied through the CEI Hub.

The Parametrix model uses the City's inventory of CEI Hub fuel storage capacity (see **Error! Reference source not found.** and Table 2 in Section 1 of this report and Appendix A for more details about the inventory) together with 2023 fuel consumption estimates from the EIA as the baseline for projecting future fuel demand. The model evaluates four scenarios: one reference scenario (Unchecked Growth) and three fuel policy-based scenarios (Current Adopted Policies, Delayed Progress, and Renewable Fueled Growth) reflecting different levels of policy implementation through 2050. Across all scenarios, for most fuel types, future fuel demand is driven by population growth, shifts in transportation technology, and state and local policy implementation. Aviation fuel demand projections are based on the Port of Portland's 2024 PDX 2045 Aviation Activity Forecasts and reflect the scenario-specific assumptions regarding sustainable aviation fuel adoption.

Application of the Model to the Proposed Capacity Reduction

The relationship between existing in-service storage capacity, operational storage capacity, annual throughput capacity, and 2036 projected fuel demand forms the technical basis for calibrating the proposed reduction level. BPS used the model's "Delayed Progress" scenario from Parametrix's modeling to inform development of the proposed Title 17 capacity reduction regulations. This scenario accounts for potential delays in achieving key policy targets including the rate of transportation electrification, sustainable aviation fuel (SAF) usage, and diesel demand reductions than the other policy scenarios, providing a more conservative estimate of future fuel demand. These assumptions provide a buffer for uncertainty in both the market and policy conditions. **Error! Reference source not found.**2025 Oregon Energy Strategy . Because that scenario depends on significant uncertainty regarding the availability of

biofuel feedstocks, it was evaluated as an alternative future rather than used as the primary planning scenario.

Under the “Delayed Progress” scenario, the model projects approximately 2.6 billion gallons of Oregon fuel demand in 2036, the proposed compliance year for Title 17 capacity reduction regulations. To evaluate whether the proposed capacity reduction would constrain future fuel supply, the model compares projected fuel demand with the CEI Hub's estimated annual throughput capacity, which refers to the amount of fuel that could move through the CEI Hub in one year (Table 6).

The model utilizes the CEI Hub’s approximately 308 million gallons of existing in-service liquid fuel storage capacity and adjusts it to approximately 277 million gallons of operational storage capacity. This adjustment reflects typical industry operating practices for aboveground storage tanks, which generally maintain approximately 10 percent of the total liquid fuel storage capacity as operational margin to accommodate operating constraints. Assuming an average fuel dwell time (the average amount of time fuel remains in storage before being distributed) of one month, or 12 tank turns per year, the model estimates the CEI Hub's annual throughput capacity (**Error! Reference source not found.Error! Reference source not found.**). The 12 tank turns per year assumption represents a conservative estimate of throughput capacity, based on EIA estimates of a 25-day average fuel supply time.

Using these assumptions, model results indicate that the proposed 20 percent capacity reduction could be accommodated while maintaining sufficient storage capacity to meet projected fuel demand. The proposed 20 percent capacity reduction results in an estimated capacity utilization rate of approximately 96 percent in 2036. Furthermore, because fuel demand is projected to continue declining under the Delayed Progress scenario, utilization is expected to decrease beyond the 2036 compliance year.

Table 6. Estimating CEI Hub Utilization Rates for 2026 and 2036

	2026	2036 (after reduction)
In-Service Liquid Fuel Storage Capacity	308 Million gals	250 Million gals
Operational Storage Capacity	277 Million gals	225 Million gals
Estimated Annual Throughput Capacity *(Capacity x 12 tank turns)*	3.3 Billion gals	2.7 Billion gals
Fuel Demand Projections	2.7 Billion	2.6 Billion
Capacity Utilization Rate *(Fuel Demand/Throughput)*	**81%**	**96%**

As a sensitivity analysis, BPS used the EIA reported 25-day average fuel supply estimate as a proxy for average fuel dwell time. This assumption is equivalent to approximately 14.6 tank turns per year and results in an estimated utilization rate of approximately 79 percent in 2036.

Additional Modeling Revisions

In response to public comments on the draft Title 17 BFT Capacity Reduction Regulations, BPS is working with Parametrix to update the fuel demand model to incorporate 2024 fuel consumption data; review fuel throughput data reported through DEQ air quality permits to better understand average fuel dwell time; and evaluate fuel volumes distributed via barge up the Columbia River. Additional analysis and information will be provided in a supplemental memorandum prior to City Council deliberations in Fall 2026.

ECOnorthwest Economic Impact Evaluation

BPS asked ECOnorthwest (ECO) to independently review the Parametrix fuel demand model and to provide an additional economic assessment to understand how fuel prices might impact Oregon's economy. ECO produced two memos: 1) a review of the fuel demand model; and 2) an analysis of the impact of incremental fuel price increases on Oregon's economy.

Fuel demand model review

ECO's review of the Parametrix fuel demand model indicates that the model is a good starting point for understanding future liquid fuel demand, while taking into account a wide range of factors (population growth, fuel efficiency improvements, electric vehicle conversion rates) and policy implementation scenarios. Challenges in data availability require the model to make key assumptions regarding the operations at the bulk fuel terminals. Furthermore, uncertainty in demographic and technological change limit the use of the model to evaluate potential economic consequences of the proposed regulations. Given the available data, ECOnorthwest finds that a potential outcome is that the proposed regulations will not impact the price of fuel. In addition, they note that storage capacity is not the sole factor in determining fuel supply or price impacts. There are other factors that impact fuel prices and

there remains uncertainty, especially due to the lack of available data, about what, if any, impact the regulations may have on fuel prices.

Specifically, the lack of data on dwell time or the speed at which terminals can replenish fuel supplies is a limiting factor. If there are no marginal costs associated with increased throughput, then the proposed policies are less likely to have an impact on supply or price. Other limiting factors include reliance on total CEI Hub storage capacity; the substitutability of storage tanks for different fuel types; and consideration of the seasonality of demand.

Fuel price impacts

The second memo explores the economic effects of hypothetical fuel cost increases ranging from modest to severe. The CEI Hub in northwest Portland serves as the primary entry point for more than ninety percent of the state's fuel supply, meaning that any disruption to Hub operations, whether from policy changes, infrastructure constraints, or external market shocks, has the potential to affect fuel availability and pricing. Increases in fuel prices do not stay contained to the pump. They transmit through the broader economy, affecting business costs, consumer spending, and regional employment

ECOnorthwest analyzes what higher fuel costs could mean for Oregon under a range of scenarios. Three findings stand out. First, the economic consequences of fuel cost increases depend on both magnitude and duration. A temporary shock imposes a meaningful but recoverable burden on employment, output, and household income, while a sustained increase compounds over time, embedding higher costs across the economy in ways that are progressively harder to reverse. Second, consumers bear the initial burden, particularly lower-income households for whom fuel represents a disproportionate share of take-home pay. The rest of Oregon faces more exposure than the Portland Metro area given its more fuel-intensive economic base. Third, Oregon ranks among the most expensive in the country for fuel, meaning that any localized increase in the price level carries competitive implications and fall on an economy that has limited room to absorb additional cost pressure.

ECOnorthwest also notes that sustained fuel price increases also tend to accelerate changes in behavior and the transition to alternative technologies (e.g. electric vehicles) that reduce fuel demand and exposure to fuel price volatility. How quickly Oregon's clean energy transition proceeds will determine the degree to which Oregon is vulnerable to supply shocks and price increases.

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About City of Portland Bureau of Planning and Sustainability
The Bureau of Planning and Sustainability (BPS) develops creative and practical solutions to enhance Portland's livability, preserve distinctive places, and plan for a resilient future.

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