



Bureau of Planning and Sustainability

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MEMO

DATE: July 7, 2022

TO: Mayor Ted Wheeler
Portland City Council

FROM: Tom Armstrong, Supervising Planner

SUBJECT: Fossil Fuel Terminal Zoning (FTTZ) Amendments
Response to Testimony

This memo responds to some of the key issues raised in the testimony before Council.

The testimony by Idaho Governor's Office of Energy and Mineral Resources, Idaho Petroleum Marketers & Convenience Store Association, Idaho Association of Commerce and Industry, Idaho State Representative Megan Blanksma and the Associated Taxpayers of Idaho are addressed in a separate memo.

In response to the complete body of testimony, the purpose of this ordinance is to limit the risk from a catastrophic Cascadia Subduction Zone earthquake by limiting the expansion of fossil fuel storage tank capacity, while at the same time allowing the existing terminals to make safety upgrades; to serve future regional needs; and facilitate a transition to cleaner fuels to reduce carbon emissions.

Testimony in Support

A major issue raised in testimony that is generally in support of adopting the amendments is the proposal that renewable fuel storage should replace fossil fuel storage, not supplement it. Further, there is a concern that any new renewable storage tank capacity could be exploited by a terminal operator by later shifting operations and use those tanks for fossil fuel storage without the knowledge of the City or the public.



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BPS response: As noted in the testimony, the region’s fuel needs is expected to be met with existing fossil fuel storage tanks. However, a key assumption in that finding is an expectation of an increasing component of renewable fuel that is difficult to separate out from the long-range US EIA forecasts, which do not breakout renewable fuel into a separate category. The exception for additional renewable fuel storage tank capacity is a buffer or hedge against potential future increases in demand in future forecasts.

Further, the existing zoning code enforcement provisions provide protection from a terminal operator that might later shift renewable storage to fossil fuel storage. In addition to the community-based complaint system, terminal operators are subject to mandatory reporting requirements to report the contents of their tanks to the State Fire Marshal. The reports are available to the City of Portland through Community Right To Know laws that will enable the City to track and monitor the on-going use of new renewable tanks.

Portland Business Alliance, Working Waterfront Coalition, Oregon Business and Industry, Columbia Pacific Building Trades Council

The testimony complains about the lack of collaboration and notice of the pending ordinance. They cite a May 20 meeting as the first contact regarding the ordinance. This is a mischaracterization of the process. This legislative procedure is a continuation of the previous 2016 and 2019 Council actions. As such, City staff provided a draft copy of the code amendments on May 9 with an invitation to the May 20 meeting, which resulted in subsequent discussions their representatives prior to the City filing the ordinance with proposed Amendment #1 on June 9.

The testimony included proposed changes to the ordinance that had been previously provided to City staff in early June. The testimony did not include any justification or explanation as to why the change is needed or what specific issue it is meant to address. The testimony falsely claims that City staff has declined to include the changes in the ordinance. On the contrary, proposed Amendment #1 is based on the suggested changes as documented in the following table.



Portland Business Alliance	Amendment #1
Allow fossil fuel storage tank capacity plus 10 percent.	Not included. Unnecessary given recent trends, future forecasts, and allowed exceptions.
Spilt definition into Fossil Fuel and Renewable Fuel	Included. The proposed range of renewable fuel standards are included as part of the legislative history in the Code Commentary.
Delete reference to methanol in the fossil fuel definition.	Not included. Methanol is a fossil fuel product derived from natural gas.
Delete reference to transloading facilities in description of Bulk Fossil Fuel Terminals.	Addressed. Clarifies the two types of Bulk Fossil Fuel Terminals – with and without storage tank capacity.
Delete reference to transloading facilities in exception #2 for truck and marine freight terminals	Included.
Delete reference to facilities that share operating facilities.	Not included. This provision is included specifically to prevent terminals from circumventing the ordinance by locating new facilities on adjacent or nearby sites.
Add exception for blending tanks and related infrastructure need to meet federal or state fuel or emission standard are not Bulk Fossil Fuel Terminals.	Not included. This provision would create a huge loophole in the regulation. “Related infrastructure” is not defined and could include fossil fuel storage tanks. “Federal or state fuel or emission standard” is an open-ended reference that refers to all type of fuels. The City has chosen to focus on allowing additional storage tank capacity for renewable fuel, fuel that complies with the City’s Renewable Fuel Standard, and for fossil fuels for exclusive use at an airport (the jet fuel exception), 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.



The testimony also repeats previous claims, without supporting evidence, that the ordinance will “hurt the local economy and, in several ways, hinder the city’s climate and safety goals”.

BPS Response: As in 2016 and 2019, these claims are not sufficiently explained, nor do they directly contradict or refute any of the supporting evidence or findings for adopting this ordinance. The ordinance has been crafted to provide the liquid fossil fuel storage tank capacity, with the allowed exceptions, necessary to serve the future regional market as part of a growing economy (Policy 6.48). The specific exceptions for renewable fuels and compliance with the City’s Renewable Fuel Standard are designed to facilitate a transition to cleaner fuels in support of the City’s climate goals (Policy 7.4). The purpose of the ordinance is to begin to proactively address the safety risks due to earthquakes by not making the problem worse by continuing to allow the unlimited expansion of fossil fuel storage tank capacity (Policy 4.79, 4.80 and 7.14).

The testimony claims that the ordinance is not consistent with City Resolution No. 37168 on fossil fuel infrastructure. This recycled argument has been rejected by City Council, which has found that resolutions provide guidance on future City actions, such as directing BPS to develop proposed code changes to advance the resolution. However, in the context of making a legislative land use decision (amending the Zoning Code), the 2035 Comprehensive Plan and Title 33 (Planning and Zoning) establish the procedures and approval criteria for making these decisions. However, the code amendments are consistent with this resolution as shown in the following table.



Resolution	FFTZ Ordinance
Improves safety	Existing FFTs designated as a limited use specifically to allow them to continue to operate to supply fossil fuels and to allow for safety and seismic upgrades.
Provides service directly to end users	The ordinance limits fossil fuel storage tank capacity at bulk fossil fuel terminals, which by definition has minimal on-site sales activity. The use exceptions specifically state that gasoline stations and other retail sales of fossil fuels are not Bulk Fossil Fuel Terminals.
Develops emergency backup capacity	Council interprets this phrase as “infrastructure that is needed to restore functions at a facility, such as a diesel generator for electricity to power the facility, and not the wholesale duplication of the facility”. The City’s approach to limit risk in an area that is at high risk of liquefaction in a major earthquake is consistent with the 2013 Oregon Resilience Plan, which recommends public-private partnerships to reduce the state’s vulnerability to seismic events by evaluating the diversification of locations for the storage of liquid fuels and identification of new liquid fuel energy corridors.
Enable recovery or reprocessing of petroleum products	The FFTZ amendments specifically exempt uses that recover or reprocess used petroleum products.
Accelerates the transition to lower emission sources	The code amendments specifically define renewable fuels and with Amendment #1 makes explicitly clear that expanding storage tank capacity for renewable fuels is not considered an expansion of a fossil fuel capacity.

The testimony calls a collaborative approach driven by facts to identify real solutions. Yet, they have failed to provide alternative facts that would suggest a different approach and the City has incorporated many of their proposed solutions into Amendment #1.



Finally, the testimony misrepresents the legal decisions regarding this ordinance. The courts have not identified legal deficiencies with the ordinance itself. The ordinance was remanded for further findings to address a wide range of policies. The findings in Exhibit A address those issues. The testimony does not contradict any of these findings or refute any of the supporting evidence.

Western States Petroleum Association (WSPA)

WSPA asks City Council to reject the FFTZ amendments because they will hinder the local economy, the transition to cleaner fuels, and implementation of potential safety upgrades. The testimony is a series of generalized statements without detailed explanation or supporting evidence. The testimony does not provide evidence to contradict any of the City’s findings or refute any of the supporting evidence.

WSPA claims the code amendments would be a public policy failure because they create significant adverse impacts on the local energy supply and subsequent damage to the economy. This claim is repeated in various forms without supporting evidence.

BPS Response: WSPA correctly states that the amendments will not limit the regional demand for fuel. It is not the purpose of the zoning code amendments. The purpose of this ordinance is to limit the risk from a catastrophic Cascadia Subduction Zone earthquake by limiting the expansion of fossil fuel storage tank capacity in an area at high risk of liquefaction, while at the same time providing enough capacity to serve future regional needs and facilitate a transition to cleaner fuels. The City has carefully considered the impacts to the regional fossil fuel supply as a means to ensure the region’s growing economy has the energy it needs. The existing terminals are designated as a limited use specifically to allow them to continue to operate to supply fossil fuels to region. The updated supporting memos on liquid fossil fuel and natural gas demand show that the amendments would not have a significant adverse impact on the “local” (or broader regional) energy supply. The liquid fossil fuel demand memo shows that the increase in demand for fossil fuels is less than the historic peak consumption, without accounting for the renewable fuel component in those forecasts and the exception that allows additional storage tank capacity for jet fuel – the fossil fuel product that accounts for most of the increased consumption out to 2050.

WSPA claims the ordinance will discourage seismic and safety improvements that typically occur with new infrastructure improvements.

BPS Response: The existing terminals are designated as a limited use to allow them to continue to operate to allow for safety and seismic upgrades. Specifically, terminals are allowed to replace and reconfigure their existing fossil fuel storage tanks to adjust to



future business needs as a way to facilitate replacement and seismic upgrades. Also, since the adoption of the 2016 ordinance and at various times during the subsequent appeals process, there have been opportunities, including since October 30, 2020, for the existing terminals to undertake fossil fuel storage tank improvements and expansions to improve safety. To date, none of the terminals have applied to build new, safer fossil fuel tanks.

WSPA claims that the ordinance will inhibit the ability to change fuel types as technology advances and fuel standards change.

BPS Response: The FFTZ amendments are based on broad definitions of fossil and renewable fuels to enable the fuel types and standards to change over time. The zoning code amendments do not regulate specific fuel types or standards – the terminals determine what goes in their fossil fuel storage tanks. The City recognizes the need for additional renewable fuel as part of a transition to cleaner fuels and with Amendment #1 makes explicitly clear that expanding storage tank capacity for renewable fuels is not considered an expansion of a fossil fuel capacity

WSPA claims the amendments will freeze existing infrastructure in place by location and size; hinder improvements to fuel infrastructure; prevent upgrades; thwart future technologies that do not fit within the current infrastructure framework

BPS Response: The existing terminals are designated as a limited use to allow them to continue to operate to allow for safety and seismic upgrades. The code amendments only limit the expansion of fossil fuel storage tank capacity, there are no limits on other types of infrastructure at the existing terminals. Except for the limits on expanding fossil fuel storage tank capacity, there are no code restrictions that would thwart future unspecified technologies. The existing infrastructure is not frozen in place because terminals are allowed to replace and reconfigure their existing fossil fuel storage tanks as a way to facilitate replacement and seismic upgrades.

WSPA claims the amendments will discourage equipment upgrades necessary to comply with federal and state clean fuel laws; prevent the transition to newer lower-carbon-fuel sources in opposition to Oregon's low-carbon-fuel standards, Oregon's Renewable Fuel Standards, federal Renewable Fuel Standards, and similar laws.

BPS Response: The ordinance allows equipment upgrades, including the replacement and reconfiguration of existing fossil fuel storage tanks. The ordinance facilitates the transition to lower-carbon renewable fuels needed to comply with Oregon's Clean Fuel Program by allowing added storage tank capacity for renewable fuels. To further



support a transition to renewable fuels, Amendment #1 specifically defines renewable fuels and clarifies that expanding storage tank capacity for renewable fuels is not considered an expansion of a fossil fuel capacity.

WSPA claims the ordinance will undermine the ability of Portland to serve downstream (upriver?) markets that are growing fast like the Tri-Cities area of Washington and Idaho.

BPS Response: A more detailed response to this issue is provided in a separate memo addressing issues raised by various interests from Idaho. The summary finding is the eastern Washington, eastern Oregon and Idaho are not solely dependent on the Portland terminals for their fossil fuel supply.

WSPA claims the ordinance will prohibit new terminals, new intermodal links and new fuel tanks in Portland, and therefore, will likely result in increased fuel transport by truck, which will lead to increased costs, congestion and emissions compared to transport by pipeline and vessels. WSPA did not provide any details on how much increased demand would trigger truck deliveries or what levels of increased costs, congestion or emissions may result.

BPS Response: WSPA misinterprets the code amendments. The code amendments only prohibit new bulk fossil fuel terminals with more than 2 million gallons of fossil fuel storage tank capacity or expanded fossil fuel storage tank capacity at existing terminals, with key exceptions that allow for expanded tank capacity for jet fuel and renewable fuel. The amendments do not limit new intermodal links. The City acknowledges that fuel deliveries via pipeline or marine vessels are more efficient and have lower emissions. The findings carefully consider the future demand projections for both liquid fuels and natural gas to ensure regional needs will continue to be met. If the regional needs continue to be met, then there is no need for additional fuel trucks from outside the region. WSPA has not provided any evidence to support their assumptions that increased fossil fuel demand will exceed the existing fossil fuel storage capacity in a way that would necessitate increased fuel deliveries by truck. The unsupported claim that the amendments would likely encourage more fuel transport by truck has been addressed by the findings in response to the LUBA remand. Despite the lack of WSPA evidence, BPS and PBOT analyzed a speculative scenario that showed that if demand triggers the need for additional truck deliveries, the most likely routes into Portland are major truck routes designed for freight deliveries.

WSPA claims the code amendments would likely increase greenhouse gas emissions, specifically by encouraging more fuel transport by truck.



BPS Response: As discussed above, the City’s analysis for future demand does not find that there will be an unmet demand for fossil fuels that will trigger increase fuel transport by truck that would increase transportation related emissions. WSPA fails to adequately explain under what circumstances there will be unmet demand for fossil fuels. Further, the amendments help reduce carbon emissions by providing for a transition to a reliable, low-carbon energy infrastructure by designating existing terminals as a limited use, which allows the terminals to continue to operate and invest in facilities to increase safety and reliability. In addition, the code amendments will allow existing terminals to add storage capacity to provide reliable low-carbon, renewable fuels to help meet the carbon emissions reduction goals. To further support a transition to renewable fuels, Amendment #1 specifically defines renewable fuels and clarifies that expanding storage tank capacity for renewable fuels is not considered an expansion of a fossil fuel capacity.

WSPA takes issue with the changing nature of the fuel demand studies and forecasts and faults the City for assuming that it can forecast needs more than ten years in the future.

BPS Response: The City acknowledges that the various fuel demand studies and forecasts in the record have changed over the last six years – that is the nature of future forecasts, they are updated to reflect the best available information. BPS has updated the demand forecasts to include the most recent data since the adoption of the 2019 ordinance. The code amendments include an exception to allow for expanded storage tank capacity for the fuel types, such as jet fuel and renewables, that are expected to see the most growth in demand. Certain types of fuels such as transitional fossil fuels and lower emission fuels mandated by the federal government will see demand increase as the demand for fossil gasoline decreases. The 2035 Comprehensive Plan and the Zoning Code are long-range planning documents. The State of Oregon utilizes a 20 year planning horizon. The US Energy Information Administration provides 30-year forecasts – which the City has relied upon to provide an extra measure of caution in defining the future regional market. Finally, the ordinance specifically calls upon BPS to report back to City Council on the trends in fossil fuel energy use and non-fossil energy use in Oregon as a means to monitor the changing fuel to ensure a fuel supply necessary to serve the regional market.

WSPA falsely claims the code amendments violate the City’s climate policy on fossil fuel infrastructure in City Resolution No. 37168 (see above).

WSPA claims the ordinance will not align with state and federal policy regarding siting energy infrastructure or transportation of fuels but fails to identify specific policies the code amendments are not in alignment with.



WSPA misleadingly claims that the ordinance prohibits relocating bulk fossil fuel terminals outside of high risk liquefaction areas in Portland.

BPS Response: As shown in Exhibit B. Remand Report, Figure 5, there are virtually no areas in Portland’s industrial areas, especially those areas with marine access, that are not located in a high risk area. Most of the areas outside of the high risk area are planned for commercial and residential uses where a bulk fossil fuel terminal would be an incompatible use with the surrounding area. Therefore the ordinance prohibits new bulk fossil fuel terminals throughout Portland.

WSPA proposes an alternative definition of renewal fuel based on federal code.

BPS Response: The proposal references a federal definition that is based on federal air quality regulations implemented through the Code of Federal Regulations that may be subject to change. The BPS recommendation is to adopt the simpler definitions in Amendment #1.

Christopher West, Pac/West Communications

Mr. West submitted an article from Stillwater Associates that provides an overview of the impacts that zoning amendments will have on petroleum and renewable fuels in the Pacific Northwest.

Stillwater Associates finds:

- The existing Oregon Clean Fuels Program (CFP) and developing Washington Clean Fuel Standard (CFS), combined with other greenhouse gas reduction initiatives, will transform the transportation fuels used in the Pacific Northwest over the next two decades.
- The changeover of light duty vehicles to electric vehicles (EVs) will mean the demand for gasoline will peak and then decline.
- Gasoline demand may stagnate for a couple of years due to the time required to begin turning over the light duty fleet, fuel demand is very likely to increase somewhat in the short term.
- EVs will not displace demand for diesel fuel as quickly because the technology is not as amenable for heavy duty demand, so demand for diesel will continue to increase if the economy continues to grow.
- Diesel can be significantly decarbonized with renewable diesel (RD) and biodiesel (BD). In fact, with the large increase in RD production capacity coming online in the next two years, renewable fuels volumes could increase dramatically and quickly.



- BD and RD have less energy per volume than diesel and diesel demand is expected to increase.
- The transition from diesel to RD and BD potentially increases the need for terminal infrastructure in Portland for two reasons:
 - Delivery mode will likely change from the Olympic pipeline from Washington refiners to ship and rail from various RD production sites, and
 - Some degree of segregation between BD, RD, and diesel is required.
- Expected growth in fuel volume, changes in delivery mode and increased need for segregation all indicate an increased need for product terminal capabilities in Portland.

BPS response: The Stillwater Associates analysis provides a general overview of the Pacific Northwest fuel distribution system and future needs (increased demand for renewable/bio diesel). These findings are consistent with the BPS analysis. The current total petroleum consumption in Oregon is less than the historic peak, therefore the existing terminals should have adequate capacity to meet a short-term increase in demand. The code amendments explicitly allow for additional renewable storage capacity to facilitate the transition to renewable diesel and biodiesel. The code only limits new fossil fuel storage tank capacity, it does not limit transloading facilities or investment in multi-modal facilities, such as rail lines or docks. The code amendments are consistent with the Stillwater Associates analysis in that the code allows for expansion of storage tank capacity for the fuels (renewables and jet fuel) that are expected to grow in demand and does not regulate the other aspects of the terminal operations, such as new marine and rail facilities.

The Stillwater Associates analysis does not provide any detailed data to indicate the scale of the need. Nothing in the article contradicts the BPS analysis of US EIA forecasts that indicates that future petroleum consumption in 2050 is expected to be less than past historic peak consumption, and with allowed added storage tank capacity for jet fuel and renewable fuel, the existing terminals will be adequate to serve the future regional market.

William Rasmussen, Miller Nash LLP

The testimony submitted is material in the agenda packet for a future July 12, 2022, Vancouver, WA, Planning Commission Workshop presentation and proposed code changes. The material was submitted without comment, so City staff is unable to determine the purpose or intent of the material.

The presentation includes slides from BERK Consulting with an overview of the fossil fuel sector. BERK Consulting appears to utilize the same US EIA data sources as the BPS demand analysis and reaches a similar conclusion – State of Washington has relatively flat historic (1998-2018) fossil fuel consumption trend compared to population growth over the same period. BERK



Consulting found restricting storage capacity could increase consumer fuel costs, but any effects are expected to be relatively minor compared to global and national trends.


The Vancouver, WA proposal is different from the Portland ordinance – different definitions, different permit processes, different limits on new or expanded facilities.

It is interesting to note that one of the facilities in Vancouver would be allowed in Portland as a Warehouse and Freight Movement use. The Tidewater Barge Lines facility is reported as having 1.3 million gallons of diesel storage capacity. This example demonstrates the economic viability of smaller facilities that are allowed under the ordinance and could be permitted to respond to growing demand in eastern Oregon, eastern Washington and Idaho.


Fossil Fuel Code Changes– Impacted Facilities

Tidewater Barge Lines (Class 1)

- 1.3 M gallons tanks storing diesel fuel
- Miscellaneous fueling stations and tanks with lube oil, gasoline, diesel, and used oil totaling less than 20K gal



Fossil Fuel Facility Code Changes - 26

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