



April 3rd, 2015

André Baugh, Chair
Planning and Sustainability Commission
City of Portland
1900 SW 4th Ave, Suite 7100
Portland, OR 97201

Re: Terminal 6 Environmental Overlay Zone Boundary and Code Amendment

Dear Chairman Baugh and PSC members;

On January 9th, 2015, Center for Sustainable Economy (CSE) submitted written testimony on the proposed environmental overlay zone boundary and code amendment for Terminal 6 to facilitate Pembina's propane export terminal. CSE will be practically affected by numerous threats to the health, safety, and economic wellbeing of our members who will be impacted by operation of the Pembina export terminal as well as the very large gas carriers and propane unit trains that will traverse the Columbia and Portland's rail system to service it.

As an organization whose members will be directly affected, we have a keen interest in ensuring that decisions by Bureau of Planning and Sustainability (BPS) the City Council, and the Port of Portland (Port) in this matter are informed by the best available science and economics and are otherwise consistent with the vision of sustainable economic development set forth in numerous planning and economic development plans and strategies the City has adopted over the past decade.

Since the time of our initial testimony, the administrative record has been supplemented with information from Pembina and the Port. There has also been an additional public hearing on March 17th and other informal meetings hosted by Pembina to discuss safety issues with local residents, including CSE members. CSE is providing this supplemental testimony as a response. Our issues are as follows:

1. PSC and the City Council lack jurisdiction over the siting of new, large energy facilities.

As we have discussed informally with Portland Sustainability Commission (PSC) members over the past month and as indicated in our initial testimony, the State of Oregon has empowered the Energy Facility Siting Council (EFSC) to be the lead state agency issuing standards and rules for the siting of large energy facilities and site certificates for their construction and operation.¹

¹ ORS 469.470; 469.503.

² ORS 469.300(11)(a)(H)

³ Energy Information Administration. 2013. EIA's Proposed Definitions for Natural Gas Liquids.

Large energy facilities covered by EFSC jurisdiction include “[a] storage facility for liquefied natural gas constructed after September 29, 1991, that is designed to hold at least 70,000 gallons.”² According to the Energy Information Administration’s current definitions, natural gas liquids include all liquefied petroleum gases (LPG) including propane.³ On-site average daily storage for the Pembina export terminal is predicted to range from 1.6 million to 3.0 million gallons.⁴ In addition, the State includes wholesale distribution of propane in its definition of “energy resource” and petroleum suppliers are required to pay an annual fee to the Department of Energy and EFSC to fund their programs.⁵ As such, EFSC jurisdiction applies and the PSC, City Council, and Port must defer to EFSC in the siting decision for Pembina’s propane export terminal and refrain from land use or leasing decisions until the EFSC process has completed.

The reason for waiting until the EFSC process concludes is important. First, EFSC may decide that Pembina’s export terminal, as currently proposed, does not meet EFSC standards and decide not to issue a site certificate. This would render moot any approvals issued by PSC, the City Council, or Port.

Secondly, EFSC has, at its disposal, experts capable of assessing the impacts of Pembina’s export terminal on soils, land use, fish and wildlife, threatened and endangered species, scenic resources, historic, cultural, and archaeological resources, recreation, public services, waste, and carbon dioxide emissions and the mandate to do so.⁶ As such, the EFSC process will help fill the significant gaps in the current Environmental, Economic, Social and Energy (ESEE) analysis noted in our initial testimony.

Third, EFSC has the authority to impose conditions that will mitigate or eliminate these impacts. For example, the EFSC has a carbon dioxide emissions standard for compressor units used for LNG storage requiring that all emissions be offset, and that a certain amount of offsets be in place prior to construction.⁷ The EFSC specifies the amount of offsets the certificate holder must provide to an offset credit account prior to beginning construction, and then the certificate holder replenishes the offset credit account based on actual emissions as directed by the Council.⁸

As another example, EFSC “recognizes the risks that construction of an energy facility could stop in a partially completed state or that an operating facility could cease operating, leaving the community with unusable property and no funds for site restoration.”⁹ This is the abandoned infrastructure, or stranded asset risk CSE raised in its initial testimony and discussed with PSC members since that time. To mitigate this risk, EFSC has a retirement and financial assurance

² ORS 469.300(11)(a)(H)

³ Energy Information Administration. 2013. EIA’s Proposed Definitions for Natural Gas Liquids.

⁴ There are 42 gallons per barrel of LPG. The current Pembina proposal is for daily storage of 37,000 barrels, increasing to 72,000 at some point in the future.

⁵ ORS 469.020 (12); ORS 469.421(8)(a).

⁶ These are all factors that must be addressed in the EFSC process. See here for a summary of the applicable standards: <http://www.oregon.gov/energy/Siting/Pages/standards.aspx#Introduction>.

⁷ ORS 469.503; OAR 345-024.

⁸ Oregon Department of Energy. 2010. Oregon’s Carbon Dioxide Standards for New Energy Facilities.

⁹ OAR 345-022-0050.

standard requiring site certificate holders to have secured a bond or letter of credit before construction begins in an amount sufficient for complete site restoration.¹⁰

While we appreciate PSC, BPS, the City Council, and the Port considering conditions they may impose on Pembina's propane export terminal to mitigate its impact, it would be prudent to wait to see what conditions the EFSC places to avoid duplicate or contradictory measures.

2. The supplemental documents filed fail to address CSE's issues in any meaningful fashion.

In its 1/9/15 testimony, CSE identified eight core issues:

1. The inconsistency of the Pembina export terminal with the City's vision of sustainable development set forth in its Climate Action Plan, Economic Development Strategy, Portland Plan, Lower Columbia Estuary Partnership Restoration Plan and Civil Rights Title VI Plan.
2. The impermissibly narrow scope of the environmental, economic, social and energy analysis (EESE).
3. The omission of significant environmental impacts from the EESE.
4. The omission of significant economic effects from the EESE.
5. The omission of significant social effects from the EESE.
6. The omission of significant energy effects from the EESE.
7. Failure to consult with relevant federal and state agencies in developing the EESE.
8. Failure to provide citizen involvement in preparing the EESE.

Nothing in the supplemental filings by Pembina or the Port of Portland address these concerns in any meaningful fashion. In fact, in many cases, these filings validate and amplify our concerns. These filings include the Pembina Project Fact Sheets, Pembina Risk Assessment, Bentek Energy Consulting Report, BPS Staff Report: PSC Q&A March 13th, 2015, Port of Portland Submittal: February 17th, 2015 and Pembina Submittal: February 17, 2015.¹¹

The project fact sheets contain no information about the deficiencies noted in our 1/9/15 comments. However, the fact sheets do validate many of the additional permitting responsibilities noted by CSE in its initial testimony but omitted from the EESE.¹² All of the federal and state agencies identified in the fact sheets and by CSE should have been consulted during preparation of the EESE as required by governing land use regulations.¹³

The Pembina Risk Assessment confirms that there is a risk of catastrophic damage to Terminal 6 and surrounding lands should a worst-case scenario unfold. Catastrophic damages associated with explosions or leaks from very large gas carriers and propane rail cars remains unaddressed but are as significant if not more so, as we demonstrated in our 1/9/15 comments. The economic

¹⁰ Id.

¹¹ These are the document titles referred to by PSC on the project website at:

¹² See Pembina Fact Sheets at "Permits Required."

¹³ These include the Federal Aviation Administration, U.S. Coast Guard, U.S. Army Corp of Engineers, Oregon Department of Environmental Quality, Oregon Department of State Lands, Energy Facility Siting Council, U.S. Fish and Wildlife Service, National Marine Fisheries Service,

and financial risks to the City associated with these events has not been addressed and incorporated into the EESE.

The Bentek study only provides generalized information about U.S. and Asian propane markets. It says nothing about the likely end uses of propane shipped from Pembina's propane export terminal. In our 1/9/15 comments, CSE's initial market research indicated that the most likely end use would be feedstocks for propylene dehydration plants (PDH) that manufacture plastics and other products; these plants come with a high carbon footprint not only due to propane combustion but also due to the outside energy required for the manufacturing process. Indeed, recent reports indicate that the growth in these PDH plants is driving LPG imports in China while imports for other uses remain flat.¹⁴ Thus, there is nothing in the Bentek report that indicates that propane exports from the Pembina propane export facility would actually generate any of the sustainable development benefits they highlighted during the 3/17/15 hearing.

The BPS staff report contains a useful list of questions and Pembina's responses. Here again, there is nothing that addresses the concerns we raised in the initial testimony but, conversely, information that amplifies these concerns. Our concerns over a wide range of environmental impacts omitted from the EESE are validated by the numerous permitting processes identified in response to question 1. The concern over rail safety and potential explosions along the rail route through Portland are validated by Pembina's response to question 5.

The City's potential financial liabilities in the event of a catastrophic event are corroborated by Pembina's response to question 11. In particular, Pembina proposes to use private insurance to cover potential losses. However, as Sightline Institute has noted, and as experience with explosions at other propane facilities and along rail routes has demonstrated, "underinsurance is the norm."¹⁵ And none of the Port's coverage would extend to accidents along the rail line through North Portland. As James Beardsley of Marsh & McLennan notes, "[t]here is not currently enough available coverage in the commercial insurance market anywhere in the world to cover the worst-case [train derailment] scenario," leaving public entities like the Port and the City vulnerable for most catastrophe-related costs. As such, bonds should be required to fill the insurance gap.

The deficiencies of the EESE with respect to environmental impacts is corroborated by Pembina's responses to questions 24 and 25, which confirm potential impacts to unprotected natural resources and recreational boating but do not offer any analysis or specify any mitigation measures. Instead, Pembina asserts that such impacts will be addressed at some future stage in the permitting process.

The Port's submission also includes an important list of questions and responses. Once again, these underscore our concerns. Pembina's response to question 2 again confirms reliance on private insurance rather than risk bonds or other financial assurance mechanisms to guard against the public financial costs of catastrophic events. Pembina's response to question 6 and the supplemental memo prepared by Tom Bouillion validate our concerns that the text amendment is

¹⁴ See, e.g. Platts McGraw Hill Financial report at: <http://www.platts.com/latest-news/oil/singapore/chinas-jan-net-lpg-imports-soar-over-four-times-27981049/>

¹⁵ See: <http://daily.sightline.org/2014/05/19/risk-assessment-for-railroads/>.

overly broad and is applicable to many other sites that can be used for export of propane using small and “handy sized” LPG gas carriers that draw 7 meters or less and thus can access many other locations zoned heavy industrial (IH) along the Columbia River.

Small to handy sized LPG vessels make up 77% of the global LPG fleet.¹⁶ Demand for small and handy sized LPG vessels is growing faster than larger sized vessels, and their advantages in the international export market are being captured by companies such as Navigator who have found that “[t]hey can enter most ports around the globe. They can accommodate long-haul routes that may not be economical for smaller carriers, and call on ports with limited infrastructure that cannot support larger carries.”¹⁷ The burgeoning market for small to handy sized LPG gas carriers underscores CSE’s contention that the code amendment will open the door to additional LPG export facilities on at least 21 additional lots zoned IH on the Columbia River where environmental overlay restrictions will be lifted and that are deep enough to handle these vessels.

3. Most of the requisite EESE analysis is being deferred to a later stage in the permitting process.

The project record is incomplete and cannot be used as a basis for action by the BPS or the City Council to amend the zoning code at this time. This is because most of the analyses of environmental, economic, social and energy consequences (EESE) have yet to be completed and because mitigation measures have yet to be developed or evaluated for their efficacy. The administrative record is replete with references to incomplete analyses that ought to have been completed before the EESE was finalized and certainly must be completed before BPS makes its recommendation and before the City Council makes its decision in this matter.

For example, with respect to unprotected natural resources including in-water habitat, riparian habitat, and habitats in the environmental overlay zone Pembina merely asserts that “[t]he permitting process will review potential impacts to these resources and appropriate mitigation will be developed for any impacts.”¹⁸ Pembina also claims to be working with the Bureau of Environmental Services to “identify a suitable project in the local area to mitigate any project impacts to areas of unprotected grassland habitat on the site.”¹⁹ With respect to recreational boating Pembina concedes “[t]he impact to recreational boating in the Oregon Slough during the time the ships are at berth is unknown at this time.”²⁰ In fact, for most environmental impacts, Pembina acknowledges the EESE’s deficiency but assumes that future “administrative proceedings” will suffice.²¹

The same deficiencies apply to social effects, including public safety. Rather than providing an in-depth analysis of public safety issues, the EESE and supplemental records refer to a host of

¹⁶ Lorentzen and Stemoco. 2015. Weekly Gas Report – Week 3, 2015. Available online at: www.lorstem.com.

¹⁷ See Marine Executive.com, “The Other Gas: While LNG gets all the headlines, it’s LPG that’s really making waves.” Available online at: <http://www.maritime-executive.com/magazine/The-Other-Gas-2014-11-25>.

¹⁸ BPS Staff Report: PSC Q&A March 13th, 2015 at 11.

¹⁹ Pembina Fact Sheets at

²⁰ Id.

²¹ Id. at 2.

ongoing studies and reviews by the U.S. Coast Guard, Federal Aviation Administration, State Fire Marshall, Bureau of Environmental Services and City of Portland Fire and Rescue.

Deferring consideration of environmental, economic, or social impacts and measures to mitigate such impacts defeats the purpose of an EESE – which is to inform land use decisions to allow, limit, or prohibit conflicting uses. In particular, “[l]ocal governments shall determine whether to allow, limit, or prohibit identified conflicting uses for significant resource sites. This decision shall be based upon and supported by the EESE analysis.”²² In other words, an EESE that fails to address impacts associated with a proposed conflicting use and instead defers analysis to a later date cannot be used as a basis for decision-making. Land Use Board of Appeals (LUBA) decisions affirm this.

For example, in one recent case, LUBA remanded an EESE back to Lane County because its analysis of wetlands impacts was deferred to a later permitting process overseen by the Division of State Lands.²³ LUBA found that, at the very least, the County must make *some* findings with respect to wetlands. And so, too, must the BPS make at least some findings on the numerous environmental, economic, and social impacts that are now being deferred for later consideration.

4. Consistency with the Comprehensive Plan has not been evaluated.

Under Oregon’s land use planning laws and regulations, code amendments must be evaluated for their consistency with acknowledged land use plans for the affected area.²⁴ There is nothing in the record thus far that indicates that BPS has evaluated the consistency of the proposed code amendment with Portland’s Comprehensive Plan (CP). Approval of the code amendment is, therefore, premature. There are many potential inconsistencies that should be evaluated, and resolved.

For example, the CP sets forth goals and objectives related to natural resources in Section 8. Among the relevant goals and objectives, the CP requires that “[w]here adverse impacts cannot be practicably avoided, require mitigation or other means of preservation of important natural resource values” with a preference for on-site mitigation “of the resource subject to impact, with the same kind of resource.”²⁵ Since nearly all the mitigation measures applicable to the Pembina propane export terminal have yet to be identified or evaluated, compliance with this portion of the CP cannot be demonstrated at this time.

As another example, the CP also addresses noise pollution, which will be exacerbated by propane unit trains traversing North Portland. The CP requires that the City “[p]artner with the

²² OAR 660-023-0040 (5).

²³ *Landwatch Lane County vs. Lane County*, LUBA No. 2013-058. Final Opinion and Order.

²⁴ See, e.g. *OCAPA v. City of Mosier*, 44 Or LUBA 452 (2003). Headnotes: Where an ordinance that adopts legislative amendments to a zoning ordinance includes no findings responding to concerns that the amendments violate Statewide Planning Goals 5 and 9 and a comprehensive plan policy, (2) there is no evidence in the record that would allow LUBA to conclude those concerns are without merit, and (3) the comprehensive plan provision pertaining to protection of industrial lands and quarries under Goals 5 and 9 is ambiguous, LUBA will remand the ordinance.

²⁵ Comprehensive Plan, Goal 8 – Environment at 8.14(D).

Port of Portland to reduce and prevent excessive noise levels from one use which may impact another use through on-going noise monitoring and enforcement procedures.”²⁶ The code amendment should be evaluated with respect to this important CP objective.

Another CP objective is to “[d]evelop and maintain a multimodal freight transportation system for the safe, reliable and efficient movement of freight within and through the City.” Both the safety and efficiency of freight transportation will be affected by the increase in propane unit trains servicing the Pembina terminal.

For the reasons set forth above and those cited in our 1/9/15 testimony, CSE requests that BPS recommend no change in current zoning at this time and prohibit the proposed conflicting use associated with Pembina’s propane export terminal.

If you wish to discuss any portion of these comments in more detail, please don’t hesitate to call us at (503) 657-7336. We look forward to discussing these points with you during the April 7th hearing.

Yours truly,



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²⁶ Comprehensive Plan, Goal 8 – Environment at 8.20.