EARTHJUSTICE

September 9, 2019

Puget Sound Clean Air Agency
1904 3rd Ave, Suite 105,
Seattle, WA 98101

SUBMITTED VIA E-MAIL TO:
PublicComment@pscleanair.org

Re: Tacoma LNG Project, & Proposed Order of Approval No. 11386

Dear Members of the Board of PSCAA, and Ralph Munoz, PSCAA Engineer,

Earthjustice submits these comments on behalf of Advocates for a Cleaner Tacoma, and the Sierra Club (collectively "ACT").[1] Advocates for a Cleaner Tacoma is a Tacoma-based non-profit focused on ensuring and improving clean air, water, and land in Tacoma. The Sierra Club is a national nonprofit organization with 67 chapters and about 780,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's Washington Chapter has approximately 31,300 members.

The Puget Sound Clean Air Agency should deny the Notice of Construction for the Tacoma LNG project. This project would commit Washington to another 40 years of fossil fuel dependence when as a state we are committed to moving aggressively in the opposite direction. The project also poses serious unexamined risks of explosion and disaster: placing such a project in a densely populated urban area is dangerous. Finally, the Tacoma LNG project will emit significant quantities of hazardous pollutants, and criteria air pollutants—an impact inadequately considered in the FEIS, and underestimated in PSCAA's analysis.

I. THE SUBSTANTIAL CHANGE IN THE PROPOSED END USES FOR THE PROJECT REQUIRES NEW ENVIRONMENTAL REVIEW.

Puget Sound Energy ("PSE") described the Tacoma LNG Project to ratepayers as a LNG storage facility that would help meet peak demand for natural gas in the winter for heating needs. Petition, *In re Puget Sound Energy, Inc.*, Wa. Utilities & Transp. Comm'n, Dkt. No. UG-151663, ¶ 6-7. PSE told the Washington Utilities and Transportation Commission ("UTC") that the "primary purpose" of the Tacoma LNG project was "to provide peak-day supply for PSE's retail

[1] ACT incorporates by reference our previous comments, the Puyallup Tribes current and previous comments, and all other public comments submitted during the public comment period on the Draft EIS, Draft SEIS, and the Draft Notice of Construction.

natural gas customers[.]" *Id.* at ¶ 9. For this reason, the UTC made PSE, as a utility, responsible for approximately 43% of the $311 million in capital costs for the Tacoma LNG project—a cost that will trickle down to ratepayers. *Id.* at ¶ 16, Table 2. Likewise in the FEIS, PSE stated that "[t]he Proposed Action would address a long-term need for new peak-day resources as identified through PSE's 2013 biennial integrated resource plan. … The Tacoma LNG facility would fill approximately 50% of the anticipated deficit." Tacoma LNG Final Envtl. Impact Statement, City of Tacoma, at ES-1, ES-2 (Nov. 9, 2015) ("FEIS"). Indeed, up through May 5, 2018, PSE estimated that approximately 10 million gallons per year would be used to supply natural gas to meet peak demand needs of natural gas utility customers. PSE, *Letter to PSCAA*, at 9, (May 5, 2018).

However, since that time, two major developments occurred: (1) PSE drastically reduced the end-use LNG from the project to meet peak shaving needs, and (2) the Washington Legislature recently enacted SB-5116 that requires utilities to rapidly decarbonize their energy mix—meaning the demand for natural gas will significantly decrease.

Although the Supplemental Final EIS states that "the Tacoma LNG Facility or its intended uses has not changed since the FEIS[,]" this statement is contradicted by end-use estimates for the Tacoma LNG project, which document peak-shaving use reduced by over 80%, from 10 million to only 1.96 million gallons per year. Supplemental Final Envtl. Impact Statement, PSCAA, at 2-6 (Mar. 29, 2019) ("SEIS"). Further, for the first time, the SEIS reveals a phase-out of peak-shaving, such that after 10 years the project would no longer be used for peak shaving, but instead would be used to exclusively provide LNG as a transportation fuel to marine and trucking customers. SEIS, App. B, at 52. This material lack of disclosure by itself requires supplementation of the EIS. *See* Code 197-11-600(1)(b) ("preparation of a new threshold determination or supplemental EIS is required if there [is]: [n]ew information indicating a proposal's probable significant adverse environmental impacts. (This includes discovery of misrepresentation or lack of material disclosure.)").

Additionally, Washington's new energy law, effective May 7, 2019, will significantly reduce the demand for natural gas in the next eleven years because it sets aggressive targets for decarbonizing the electricity generation sector. This new law requires utilities, including Puget Sound Energy, to become greenhouse carbon neutral by 2030, and carbon free by 2045. SB-5116, § 2 (2019). This new law will require a phase out fossil fuel electricity generation, including natural gas fired power plants, and oil-fired power plants. PSE is planning to phase out fossil fuel plants by 2030 to meet these requirements. PSE Technical Advisory Group, "Review of Clean Energy Transformation Act, scenarios and sensitivities, upstream gas emission methodology," at 41, May 29, 2019.[2] PSE originally proposed the Tacoma LNG project because during peak energy demand times in winter, it had to divert natural gas from gas-fired power plants to heat homes. However, if gas-fired power plants are phased out and decommissioned, this need no longer exists. PSE is already planning for this new outcome. *Id.* at 48 (describing scenario where Tacoma LNG project is not built).

[2] https://pse-irp.participate.online/.

This substantial change to the project and new legislation indicate that the Tacoma LNG project is not needed for peak-shaving at all. PSCAA should go back to the drawing board to evaluate the purpose and need for this project for what it really is—a facility to process and store LNG as a shipping fuel for marine and trucking customers. This new information is also highly concerning because it means that PSE paid almost half the cost of constructing the Tacoma LNG facility, a cost that will trickle down to ratepayers, when certainly in the long-term, but perhaps even in the short-term, the project would not be used to support the need of gas utility customers at all.

Changing the project to solely focus on providing fuel to marine and trucking customers would have an adverse effect on the environment because it would keep the shipping and transportation industry reliant on fossil fuels for at least the next 40 years. If new information or substantial changes indicate a project would probably have a significant adverse environmental impact, then a Supplemental Environmental Impact Statement must be prepared. Wash. Admin. Code 197-11-600(1)(b). As Governor Inslee stated, the dangers of climate change are urgent, and hence allowing the shipping industry to simply transition from one fossil fuel to another is a step in the wrong direction because it prevents the industry from converting to low-carbon and/or fossil-free alternatives. This is particularly problematic because one of PSCAA's goals in its strategic plan is to reduce climate changes impacts in the transportation sector. *See* PSCAA, 2014-2020 Strategic Plan, at 20-21.[3] PSCAA must conduct new environmental review in light of this substantial change to the project.

II. PSCAA GROSSLY UNDERESTIMATES THE CLIMATE IMPLICATIONS OF OPERATING THE TACOMA LNG FACILITY

Addressing climate change is the most urgent issue of our time. The Pacific Northwest has already warmed nearly 2 degrees Fahrenheit since 1900, causing reductions in mountain snow pack, and speeding the usual slow release of water for communities, agriculture, rivers, and soils. U.S. Global Change Research Program, "Chapter 24: Northwest," Fourth National Climate Assessment (2017).[4] In 2015, record winter warmth lead to record-low snowpack in the Pacific Northwest, causing water scarcity, drought, and large wildfires. This adversely affected farmers, hydropower, drinking water, salmon, and recreational opportunities. *Id.* Increased warming due to climate change will only exacerbate these extreme climate events. Agriculture, fisheries and forestry accounted from over 700,000 jobs in the Pacific Northwest, and more than $139 billion in sales. Outdoor recreation generates $51 billion in consumer spending and supports 451,000 jobs. These jobs are most at risk from climate change. *Id.*

We as a planet are at a tipping point that is rapidly sliding toward disaster. Significant reductions to greenhouse gas emissions are needed now, not fifty years in the future. "Large reductions in present-day emissions of the long-lived GHGs are estimated to have modest temperature effects in the near term (over the next couple decades), but these emission reductions are necessary to achieve *any* long-term objective of preventing warming of any

[3] https://www.pscleanair.org/230/Strategic-Plan.
[4] https://nca2018.globalchange.gov/chapter/24/.

desired magnitude." "Chapter 29: Mitigation," Fourth National Climate Assessment (2017) (emphasis added).[5]

In the SEIS, PSCAA determined that the Tacoma LNG project would slightly decrease GHG emissions compared to the status quo. SEIS 4-14. Further, PSCAA concluded that even if their estimates are incorrect, and the project slightly increases GHG emissions, such a modest increase in GHGs would not be consequential to global climate change. *Id.* These conclusions are wrong in multiple respects.

"Natural" gas, which consists primarily of methane, is a climate disaster. Methane is responsible for 25% of global warming to date. T. Nace, et al. "The New Gas Boom," *Global Energy Monitor*, (June 2019).[6] While combustion of gas results in lower carbon emissions than coal, once leakage rates are accounted for across the supply-chain, overall GHG emissions from this fuel source can be as bad—or even worse—than coal. *Id.* Liquifying natural gas requires additional energy and results in even greater GHG emissions. Moreover, most gas consumed in North America is produced by fracking techniques that result in high levels of groundwater and other pollution. The notion that gas is a "bridge fuel" is now widely discredited, and new infrastructure investments in gas should be avoided.

The Supplemental EIS prepared by PSCAA on greenhouse gas emissions is flawed because it makes numerous assumptions that tip the scale in favor of project approval by overestimating the putative benefits of the Tacoma LNG project. Once these favorable assumptions are removed, in the short and long term GHG impacts of this project are both adverse and significant and warrant denial of PSCAA permits.

False Assumption 1: Gas from British Columbia is cleaner. As discussed at length in public comments on the Supplemental Draft EIS, PSCAA erroneously assumed that natural gas shipped from British Columbia or Alberta ("BC gas") would have lower emissions than other sources of natural gas, such as fracked gas from the United States. Mobile monitoring studies demonstrate that methane emissions in British Columbia are much higher than the industry estimates that PSCAA relied on.[7] Airborne testing in Alberta, Canada, found actual methane emissions from gas field exceed reported data by 3-5 times, due to unreported venting of gas.[8] These and other studies cited to in the public comments document high methane emissions rates from BC gas. This is consistent with other studies showing far higher leakage rates from gas wells. Once the best information is accounted for, the purported GHG "benefits" of this project disappear. Moreover, even assuming BC gas has fewer emissions, exclusive use of BC gas for

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[5] https://nca2018.globalchange.gov/chapter/29/.
[6] https://globalenergymonitor.org/wp-content/uploads/2019/06/NewGasBoomEmbargo.pdf
[7] E. Atherton, et al., "Mobile Measurement of Methane Emissions from Natural Gas Developments in Northeastern British Columbia, Canada," *Atmospheric Chemistry and Physics*, 2017.
[8] M. Johnson, et al., "Comparisons of Airborne Measurements and Inventory Estimates of Methane Emissions in the Alberta Upstream Oil and Gas Sector," *Environ. Sci. Technol.* Vol. 51 at 21 (Oct. 17, 2017), https://pubs.acs.org/doi/full/10.1021/acs.est.7b03525.

this project would merely result in fuel shuffling. Including a condition requiring use of BC gas in this project would not prevent PSE from substituting non-Canadian natural gas for other PSE projects that currently uses it. Moreover, this mitigation measure is not reasonable because it is not even clear that this condition is legal and enforceable. *See* Wash. Admin. Code 197-11-440(6)(a) ("[T]he EIS shall . . . discuss reasonable mitigation measures that would significantly mitigate these impacts.).

False Assumption 2: Inflated GHG emissions from the no-action alternative. With regard to peak shaving, the Tacoma LNG project would store natural gas so that during peak demand times in the winter, natural gas would be stored and available to distribute to customers. As documented above, the project will no longer be used for this purpose. Even if that was not the case, the SEIS muddles the GHG analysis for this use. Without the project, PSE claims that it would need to operate gas-fired power plants to meet peak electricity needs when natural gas is diverted for industrial and home heating uses. SEIS, App. B, at 36, 60. However, PSE meets peak electricity needs using a variety of energy resources including renewable energy, and battery power. PSE, *Integrated Resource Plan*, at 6-11 (2017).[9] To meet future peak electricity needs PSE is investing in conservation, renewable energy and battery power. *Id.* at 1-17. PSCAA cannot rely on the one of the most polluting energy sources, gas-fired power plants, to develop its GHG emissions estimates, when energy generation during peak demand is diversified.

False Assumption 3: 40 years of unchanged use of dirty marine fuel. The lifecycle analysis also makes the faulty assumption that LNG would replace marine diesel at a one-to-one ratio, meaning that PSCAA assumes that under the no-action alternative the shipping industry would continue to use dirty marine diesel for 40 years, rather than convert to less polluting new technologies, such as electric, hydrogen, ammonia, or biofuel-powered ships.[10] This assumption is flawed because the shipping industry is already converting to electric and hybrid-electric forms of transportation. P. Hockenos, "Europe Takes First Steps in Electrifying World's Shipping Fleets," Yale Environment 360, Feb. 22, 2018.[11][12] The first electric shipping tanker may be built within the next two years. S. Hanley, "Japanese Consortium To Build World's First

[9] https://pse-irp.participate.online/.
[10] A ship powered by biofuel was already launched this year. M. Cuff, "IKEA and shipping giant CMA CGM to pilot first sustainable marine biofuel," GreenBiz, Mar. 15, 2019, https://www.greenbiz.com/article/ikea-and-shipping-giant-cma-cgm-pilot-first-sustainable-marine-biofuel. The company that built engines for TOTE marine is building engines that rely on ammonia as a fuel. T. Brown, "MAN Energy Solutions: an ammonia engine for the maritime sector," Ammonia Energy Association, Jan. 24, 2019, https://www.ammoniaenergy.org/man-energy-solutions-an-ammonia-engine-for-the-maritime-sector/.
[11] https://www.npr.org/2019/07/15/736565697/giant-shipper-bets-big-on-ending-its-carbon-emissions-will-it-pay-off
[12] https://e360.yale.edu/features/europe-takes-first-steps-in-electrifying-worlds-shipping-fleets.

Electric Tanker" CleanTechnica, Aug. 12, 2019.[13] Other lower emitting technologies will surely develop in coming years as well.

The baseline for the no-action alternative should be based in real-world scenarios, not an assumption that locks the world into climate disaster by assuming the shipping industry will never change. The International Maritime Organization ("IMO") aims to cut shipping emissions by 40% by 2030, and 70% by 2050. Int'l Marine Org., "Initial IMO Strategy On Reduction Of GHG Emissions From Ships," § 3.1.3.[14] One of the largest shipping companies in the world vows to become carbon neutral by 2050. C. Domonoske, "Giant Shipper Bets Big On Ending Its Carbon Emissions. Will It Pay Off?" NPR, July 15, 2019. And these targets are not nearly aggressive enough in light of the growing climate crisis. Washington is already pushing to convert ferries to electric engines. J. Ryan, "Gov. Jay Inslee wants Washington state ferries to switch to electricity," Kuow.org, Jan. 7, 2019.[15] Regulations to bolster a transition to lower emitting fuel sources in the shipping sector is foreseeable within the next 40 years.

Rather than continued use of the dirtiest marine diesel until 2060, the baseline for PSCAA's analysis should be emissions reductions targets that actually reflect climate needs—this is the *actual* 40 year baseline to compare to this project. As indicated by PSCAA's own analysis, converting from diesel to LNG would only marginally decrease greenhouse gas emissions, and then only under false assumptions. The planet needs more than a slight decrease in carbon emissions—such a goal commits our plant to catastrophic global warming. The Tacoma LNG project would commit ships that convert to natural gas to relying on this fossil fuel for at least the next 40 years until 2059, when they would otherwise transition to fossil-free fuels. The Tacoma LNG project is taking Washington in the wrong direction by committing it to decades of continued climate disruption.

False Assumption 4: Underestimation of methane impacts on climate warming. "Methane is CO_2 on steroids. It spends roughly 12 years trapping atmospheric heat 87 times more effectively than CO_2, then it becomes CO_2 itself." T. Powell, "Methane's 20- and 100-year Climate Effect is like CO2 on Steroids," Sightline Institute, Feb. 12, 2019.[16] The SEIS uses global warming potentials from the Fourth Assessment Report of the IPCC report, which underestimate the impact of methane as compared with the IPCC's updated Fifth Assessment Report. "The [global warming potential] of methane increased by about 20 percent between the IPCC's fourth and fifth assessment report, when the IPCC first included multiple feedbacks in the atmosphere that can cause methane to produce other gases that trap heat, like ozone and water vapor." *Id.* PSCAA should be relying on the best available science for assessing climate

[13] https://cleantechnica.com/2019/08/12/japanese-consortium-to-build-worlds-first-electric-tanker/.
[14] https://unfccc.int/sites/default/files/resource/250_IMO%20submission_Talanoa%20Dialogue_April%202018.pdf
[15] https://www.kuow.org/stories/ electric-ferries-reduce-pollution-benefit-to-orcas-less-clear.
[16] https://www.sightline.org/2019/02/12/methane-climate-change-co2-on-steroids/.

impacts, not outdated information.[17] Further, PCSAA refused to analyze the short-term climate effects from the project, and only looked at global warming potentials using the 100-year timeline, instead of the 20-year timeline. Agencies are required to consider both short-term and long-term effects. Wash. Admin. Code 197-11-060(4)(c). In the shorter 20-year timeline, methane emissions from the Tacoma LNG project would have greater impact on climate change. Analysis of impacts in the 20-year timeline is also important because it is the critical window during which human beings must take action to prevent catastrophic climate change.

False Assumption 5: PSCAA looked at benefits, but not adverse impacts of fuel bunkering on ships. PSCAA's SEIS analysis is also flawed because it analyzes the possibility of using ships to transport fuel from the Tacoma LNG facility even though regulators, including PSCAA itself, repeatedly deny that the facility will be used for that purpose. The engineering worksheet for the Notice of Construction clearly states that, "[t]he Tacoma LNG Project will only be fueling vessels, not filling tank ships or tank barges that transport bulk LNG." PSCAA, Draft Notice of Construction at 62. However, the SEIS includes in its analysis use of the Tacoma LNG facility to transport LNG to marine ships:

> LNG may also be supplied to bunker vessels for subsequent transfer to ships. In this process the bunker vessel would load LNG via the Marine Vessel LNG Fueling System. The bunker vessel would then transit to the LNG-fueld marine vessel, anchor alongside the vessel, and conduct a ship-to-ship transfer of the LNG.

SEIS, App. B at 34. PSCAA cannot look at the purported benefits of bunkering to reduce GHG emissions by ships by transitioning them away from marine diesel, but then refuse to look at the environmental costs of the exact same use.

False Assumption 6: Minimal leakage of methane from maritime ships. The SEIS also underreports the purported methane slippage that would occur on the TOTE maritime vessels as they burn LNG. They use the smallest value of 5.3 g/kWh for slippage, as opposed to the larger SINTEF recommendation of 6.9 g/kWh or the manufacturer testbed value of 7.6 g/kWh. SINTEF is a Norwegian research organization who researched methane slippage in a recent report. SINTEF, GHG and NOx emissions from gas fueled engines," (Jun. 13, 2017).[18] As noted in the SEIS sensitivity analysis, just using the SINTEF recommendation alone will cause the LNG alternative to be much dirtier than the No Action Alternative. SEIS at 134. Even when PSE completed their own lifecycle analysis, their peer reviewer recommended that they should be using the manufacturer testbed value of 7.6 g/kWh. PSE, *Response to PSCAA Data Request*, at 64, May 28, 2018. Further, SEIS failed to incorporate the emissions associated with

[17] The U.S. Environmental Protection Agency relies on updated values in the Fifth Assessment Report when calculating climate change impacts. U.S. Envtl. Prot. Agency, "Understanding Global Warming Potentials," https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

[18] https://www.nho.no/siteassets/nox-fondet/rapporter/2018/methane-slip-from-gas-engines-mainreport-1492296.pdf

the delivery of the final coarse silica sand to the fracking wells in B.C. or Alberta. SEIS at 169. This is despite the fact that the wells are requiring more and more sand for fracking.

Each of these assumptions bias the life-cycle analysis in favor of project approval. Collectively, they paint a false picture of this project's significant climate impacts. Proceeding with this project without fixing flaws in the SEIS is a violation of SEPA, which requires honest and accurate disclosure of impacts. Finally, in light of significant changes to the project, and new information indicating that PSE is unlikely to use the Tacoma LNG facility as a storage facility at all, PSCAA must reevaluate greenhouse gas emissions to a) stop claiming credit for offsetting electricity production at gas-fired power plants; and b) assess the impacts of boat traffic from increased LNG fueling.

Lastly, the SEIS is also flawed because it dismissed impacts to global climate even if GHGs would increase. The SEIS observes that even if some of its assumptions are wrong and the project would increase GHG emissions relative to the no action alternative, they would not be significant. This is profoundly misguided. Any project's GHG emissions would appear small compared to total global emissions, but it is precisely this mindset that created the climate crisis. Any increase in GHGs is a significant, adverse impact that is inconsistent with state law and shared values, and cannot be allowed.

In fact, any energy project that does not substantially *reduce* greenhouse gas emissions causes a significant impact on our global climate. Decisions made to today will "set into motion the degree of impacts that will likely last throughout the rest of this century, with some impacts (such as sea level rise) lasting for thousands of years or even longer." U.S. Global Change Research Program "Chapter 29: Mitigation," Fourth National Climate Assessment (2017). "Early and substantial mitigation" is the best chance for reducing climate impacts in the near term and longer term. *Id*. Early mitigation can avoid impacts such as reducing the loss of perennial sea ice, and affecting ice-dwelling species, like polar bears. It also can prevent critical thresholds from being crossed, such as a rise in sea level. *Id.* Scientists estimate that to meet the Paris Agreement climate goals of stopping global warming at 1.5 degrees Celsius, globally " little or no new CO2-emitting infrastructure can be commissioned, and that existing infrastructure may need to be retired early[.]" D. Tong, et al., "Committed emissions from existing energy infrastructure jeopardize 1.5 °C climate target," *Nature*, Vol. 572, at 373, Aug. 15, 2019.[19]

The Tacoma LNG project would build infrastructure that commits the shipping industry, and PSE, to at least another 40 years of fossil fuel consumption. By delaying the radical reductions in GHG emissions that are required, the Project would "jeopardize achieving any long-term goal given uncertainties in the physical response of the climate system to changing atmospheric CO2, mitigation deployment uncertainties, and the potential for abrupt consequences." *See* U.S. Global Change Research Program "Chapter 29: Mitigation," Fourth National Climate Assessment (2017). PSCAA has the authority to deny the project based on this significant impact to our climate, and should exercise its right to do so. *Columbia Riverkeeper et*

[19] https://www.nature.com/articles/s41586-019-1364-3.

al. v. Cowlitz County et al., SHB No. 17-010c at *17 (Sept. 15, 2018) (acknowledging agency can impose conditions or deny a project based on greenhouse gas emissions under agency's substantive SEPA authority).

Proceeding with the project in spite of anticipated climate warming impacts also violates PSCAA's mission to manage air quality in the Puget Sound region to reduce activities that contribute to climate change. PSCAA must either deny permits outright, or stay permit approval and conduct a revised supplemental EIS before proceeding.

III. PSCAA CANNOT RELY ON THE FLAWED FINAL EIS.

PSCAA only conducted supplemental review on a single issue—lifecycle GHG emissions—and otherwise is relying on the Final Environmental Impact Statement ("FEIS") prepared by the City of Tacoma in 2015 for all other impacts. However, the FEIS is fundamentally flawed and cannot be relied on to approve this project, especially when the project has changed substantially such that the FEIS neither reflects the true purpose and need for the project, nor considers new environmental impacts and risks associated with the new configuration of the project. The flaws in the FEIS have been well documented in previous comments, and include at least the following:

The Final EIS failed to adequately examine serious public health and safety risks of gas leaks, explosions, and fire at this facility located in a densely populated city. In the Final EIS, the City of Tacoma only chronicled two accidents at LNG facilities: a 1944 disaster in Cleveland that killed 128 people, and an industry-changing explosion at Cove Point, Maryland, in 1979. FEIS at 3.5-7. The Final EIS ignores the most significant disaster in recent times—the explosion at the peak shaving storage facility in Plymouth, Washington in 2014. The Plymouth LNG explosion injured five workers and forced hundreds of people to evacuate their homes within a two-mile radius of the facility. J. Barnard, "'Miracle' Nobody Died in Blast at Eastern Washington LNG Plant," *Seattle Times*, Apr. 2, 2014.[20]

Shortly after 8:00 a.m. on March 31, 2014, gas processing equipment at Plymouth LNG exploded into a towering, mushroom-shaped cloud. Nearby residents saw flames shoot into the air, and people living three to six miles from the plant could feel the explosion. The blast sent 250 pounds of debris and shrapnel flying as far as 300 yards, damaging buildings and equipment and puncturing one of the large LNG storage tanks.

T. Powell, "How Industry and Regulators Kept Public in the Dark After 2014 LNG Explosion in Washington, Sightline Institute, Feb. 8, 2016.[21] The fumes of released gas sickened residents and emergency responders. *Id*. The leak continued for 24 hours until it was finally shutdown. *Id.* PHMSA identified the cause of failure as a "substandard purge" of gas from the processing

[20] https://www.seattletimes.com/seattle-news/lsquomiraclersquo-nobody-died-in-blast-at-eastern-washington-lng-plant/.
[21] https://www.sightline.org/2016/02/08/how-industry-and-regulators-kept-public-in-the-dark-after-2014-lng-explosion-in-washington/.

unit that then exploded when the system started again. PHMSA, "Failure Investigation Report – LNG Peak Shaving Plant, Plymouth Washington," at 11 (Apr. 28, 2016).[22] In other words, ordinary negligence caused a disaster that could have obliterated an entire town.

The Final EIS never even addressed this major disaster in Washington. Nor did it analyze the risk of physical damage to the Tacoma LNG storage tank, which the Plymouth disaster demonstrates is a reasonably foreseeable possibility. Similarly, at the Cheniere LNG export facility in Louisiana, workers discovered two large cracks in the storage tanks that were releasing LNG. Reuters, "U.S. says Cheniere must do work on Louisiana Sabine LNG storage tanks," July 9, 2019.[23] Further, the FEIS never considered risk models run by the Tacoma Fire Department showing that in the event of a disaster and major leak, the facility could would require a 12.6 mile emergency response zone. Advocates for a Cleaner Tacoma, "Did the City of Tacoma Hide LNG Safety Documents from the Public?" Aug. 7, 2019.[24] ACT obtained these documents recently in response to a Public Records Act request. The Final EIS never considered these risks, and it relied on a preliminary design of the facility that lacked sufficient detail to determine health and safety risks.

Finally, the project would also emit a significant quantity of hazardous air pollutants close to residential neighborhoods and the adjacent Northwest Detention Center. Both individually, and cumulatively, emissions of these pollutants pose significant health risks to the public that the FEIS failed to consider or disclose. Yet, the FEIS contains no explanation of how toxic air emissions would affect residents that live near to the project. FEIS at 3.2-9 to 3.2-12.

The FEIS also fails to discuss cumulative air toxic impacts from industrial activities adjacent to the Tacoma LNG project. FEIS at 3.13-5, 3.13-6. The proposed location of the Tacoma LNG facility is surrounded by facilities that emit air pollution. The zip code for proposed facility includes nine major sources of air pollutants, and seven minor sources. The FEIS acknowledges that the facility is next to two oil refineries, a paper mill, and other industrial facilities. FEIS at 3.2-6. However, it never analyzes the cumulative effects on human health of air pollutant emissions from these facilities, in addition to the current project. PSCAA should stay the permit proceedings and conduct a Supplemental EIS on risks to public health due to toxic emissions from the Tacoma LNG project.

Finally, the FEIS failed to consider the environmental impacts of increased boat traffic from use of the facility for LNG fueling. More ships carrying explosive gas, in close proximity,

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[22] https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/FIR_and_APPENDICES_PHMSA_WUTC_Williams_Plymouth_2016_04_28_REDACTED.pdf.

[23] https://www.reuters.com/article/us-cheniere-energy-lng-outages/u-s-says-cheniere-must-do-work-on-louisiana-sabine-lng-storage-tanks-idUSKCN1U42IA

[24] https://www.cleanertacoma.org/press-release/did-the-city-of-tacoma-hide-lng-safety-documents-from-the-public/

poses significant safety risks, as well as the risk of emissions associated with fueling and transportation. PSCAA would be violating SEPA by relying on the FEIS.

In short, the FEIS describes a different project for a different purpose, from a different era in which the urgency of weaning off fossil fuels was not as apparent as it is today, and it completely fails to address critical issues. PSCAA should stay permit issuance pending a complete environmental review of health and safety risks from the Tacoma LNG facility.

IV. THE PROJECT WILL CAUSE FURTHER DETERIORATION OF EXISTING POOR AIR QUALITY.

To process natural gas the Tacoma LNG facility will operate a nearly constantly operating flare to burn waste gases and pollutants. Through this process, the flare would emit large quantities of hazardous air pollutants, including benzene, toluene, and xylene. Benzene causes blood disorders, and chronic exposure can cause leukemia.[25] Toluene can cause respiratory illness, and is a developmental toxicant.[26] Xylene can cause developmental effects such as delayed bone development in fetuses, and chronic exposure can cause neurological effects.[27] PSCAA assumes the flare will have a 99% destruction efficiency, meaning that the flare will destroy 99% of hazardous pollutants at all times operated. As articulated in the Puyallup Tribe's comments, this is an overly optimistic assumption that fails to account for real world operating conditions. A destruction efficiency of even 1% less, means that hazardous air pollutant emissions from the facility will double. The flare would also emit large quantities of VOCs. If the destruction efficiency assumption for the flare is corrected, the Tacoma LNG could emit enough air pollutants that it should be characterized as a major source, not a minor source as currently described. PSCAA cannot permit this project without undergoing a full major source review.

V. THE PROJECT WILL EXACERBATE EXISTING ENVIRONMENTAL INJUSTICES.

Operation of the Tacoma LNG facility would expose the South Sound community to grave safety risks from explosion hazards, and toxic air pollutant emissions—adding to the pollution burden in an already heavily industrialized neighborhood. The facility also has the potential to adversely affect the health of people incarcerated at the Northwest Detention Center. This neighborhood near to the harbor is already ranked in the top 10% of Washington state communities worst affected by environmental health disparities. Washington Environmental Health Disparities Map Project, https://fortress.wa.gov/doh/wtn/WTNIBL/. The facility will also directly affect members of the Puyallup Tribe that live in areas directly surrounding the LNG plant, are likely to be adversely affected by vapors, pollution, and other emissions from the

[25] U.S. Envtl. Prot. Agency, "Benzene," https://www.epa.gov/sites/production/files/2016-09/documents/benzene.pdf.
[26] U.S. Envtl. Prot. Agency, "Toluene," https://www.epa.gov/sites/production/files/2016-09/documents/toluene.pdf.
[27] U.S. Envtl. Prot. Agency, "Xylenes (Mixed Isomers)," https://www.epa.gov/sites/production/files/2016-09/documents/xylenes.pdf.

facility. Despite these potential impacts, neither the Final EIS nor the Supplemental EIS discuss or evaluate environmental justice impacts caused by the Tacoma LNG facility. The failure to analyze these effects PSCAA's mission to enable everyone in the region to breathe clean air, and reduce inequities in the pollution burden experienced by environmental justice communities. *See* PSCAA, 2014-2020 Strategic Plan, at 17-18.[28] PSCAA should delay permit issuance, pending an analysis of environmental justice impacts caused by the Tacoma LNG project.

VI. THE PROCESS FOR PERMITTING TACOMA LNG SUFFERED FROM MAJOR FLAWS.

The process of permitting and environmental review of the Tacoma LNG project has been irretrievably broken from its inception. First and foremost, approval of the Tacoma LNG Project has proceeded without adequate consultation with, and over the consistent and principled objections of, the Puyallup Tribe. ACT stands with the Tribe in insisting that its rights be respected. The LNG project is constructed within and adjacent to the 1873 Survey Boundary for the Puyallup Tribe's Reservation. In addition, the Tribe owns land, held in trust by the United States for the benefit of the Tribe, directly across the waterway from the proposed Tacoma LNG Plant site. The Tribe's rights cannot be diminished or interfered with absent authority from Congress. Thus far, PSCAA has refused to engage in government-to-government consultation with the Tribe. Such an omission by the PSCAA is a violation of federal law.

Finally, PSE is in violation of PSCAA's requirements because it proceeded with construction of the Tacoma LNG facility before receiving a Notice of Construction. Constructing a new source without a permit from PSCAA is a violation of the agency's regulations, and should weigh against approval of the NOC, because it shows a disregard for regulatory requirements. Further, it is grossly irresponsible to use ratepayer funds to build a project without first acquiring permits, especially in the face of heated community opposition. While PSE proceeded with this construction at its own risk, we urge PSCAA to enforce its regulations against PSE to prevent any additional construction until permitting and environmental review is complete.

VII. CONCLUSION

In light of the urgent need to respond to the climate crisis, building fossil fuel infrastructure that commits Washington to continued GHG emissions for many decades is as unwise as it is unlawful. PSCAA has the authority under SEPA to deny this permit based solely on the significant impact it will cause to the global climate by locking the shipping industry into continued dependence on fossil fuels for the next forty years—a significant environmental impact. At a minimum, serious flaws in the environmental review for climate change impacts, and health and safety effects, also require staying project approval until these risks are fully disclosed and considered.

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[28] https://www.pscleanair.org/230/Strategic-Plan.

Thank you for your careful consideration of these matters.

Sincerely,

Jaimini Parekh
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Attorneys for
Advocates for a Cleaner Tacoma
Sierra Club