



PACIFIC ENVIRONMENT



November 11, 2022

Mario Cordero
Executive Director
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802

Re: LNG Bunkering North American Summit

Dear Mr. Cordero,

On behalf of our *Ports for People* campaign to end port and ship pollution and a coalition of campaign partners, we strongly urge you to **withdraw your speaking commitment and attendance for the LNG Bunkering North American Summit in Washington, D.C. on November 17, 2022.** In the face of inextricably linked climate, ecological and public health crises, **we must stop investing in and supporting fossil fuels and fossil fuel infrastructure – including liquefied natural gas (LNG) bunkering at the Port of Long Beach.**

LNG leaks potent methane greenhouse gas emissions that are exacerbating our climate crisis.

Climate change is already ravaging our state with record-breaking droughts, heat waves and wildfires – all induced by generations of reliance on fossil fuels. Southern California has irreversibly warmed by [3 degrees Fahrenheit](#) in the last century, and Long Beach is projected to warm by an additional [4 degrees Fahrenheit](#) by 2050. In summer 2021, heatwaves in the U.S. Pacific Northwest and British Columbia, Canada [killed 800 people](#). The 2021 heatwaves were deemed a “[once-in-10,000-years kind of event](#)”. Then, in September 2022, the West Coast states suffered a 12-day heatwave that [shattered more than 1,000 heat records](#). These increasingly severe heatwaves harm and kill people, shock and strain our energy systems and power grids, and [interact with windstorms to start and worsen wildfires](#).

With LNG production on the rise, a new study by the World Meteorological Organization reported that [methane concentrations are rising faster than ever](#). Echoing the WMO’s alarm on rising emissions the U.N. Climate Change Secretariat Executive Secretary Simon Stiell warns

that “Government decisions and actions must reflect the level of urgency, the gravity of the threats we are facing, and the shortness of the time we have remaining to avoid the devastating consequences of runaway climate change. **We are still nowhere near the scale and pace of emissions reductions required.**”

At a time when the Port should be rapidly ending fossil fuel development to mitigate our present climate crisis, its action in support of LNG conflicts with the Port and the City’s climate mitigation and adaptation goals and the well-being of its communities. During the Port’s presentation on its 2021 emissions inventory, staff indicated that the Port is already unlikely to meet voluntary NOx reductions from the 2017 Clean Air Action Plan (CAAP) goal of 2023. **If the Port continues on this trajectory, the Port will be unable to achieve its air quality pollution and emissions reductions goals. The Port must accelerate the transition to a zero-emission future, and it must start now.**

In 2020, the Port joined SEA-LNG, a multi-sector industry coalition created to accelerate the widespread adoption of LNG as a marine fuel. However, numerous studies have shown [LNG leaks super-potent methane \(CH₄\) emissions](#), which is 80 times more potent in its climate warming potential than carbon dioxide (CO₂) over a 20-year period. **In other words, use of LNG will not reduce global warming; instead, it will accelerate global warming and worsen our ongoing climate crisis exponentially.**

Despite this knowledge, the Port continues to pursue LNG bunkering capability at its terminals. The draft Port of Long Beach Master Plan update recommends expanding ‘permissible use’ at Pier S to include LNG bunkering. This summer, the Port of Long Beach became the [first port on the U.S. West Coast](#) to refuel ships with LNG. Pasha Hawaii’s new ‘Ohana Class container ship, George III, refueled at the SSA Marine terminal on Pier A with LNG delivered by tanker trucks—sending signals that the Port is leaning towards LNG bunkering development.

By taking these steps, the Port is neglecting its climate commitments and the health of its neighboring communities in pursuit of profit. Investments in LNG now will lock Long Beach into decades of fossil fuel pollution and emissions. **Now is the time to invest in the Port’s zero-emission future—and to reject LNG as the dangerous fossil fuel it is.**

[LNG is a fossil fuel that will worsen the climate crisis.](#)

When used as a marine fuel, LNG causes methane slips, or leaks. Methane (CH₄), LNG’s main ingredient, is 80 times more potent a greenhouse gas than carbon dioxide (CO₂), and marine engines leak large amounts of unburned methane. The International Council on Clean Transportation (ICCT), an international non-profit research organization headquartered in

Washington, D.C., found that the most popular marine engines emit up to **82% more carbon dioxide equivalent emissions than marine gas oil.**

LNG poses high risk to public safety and public health.

In addition to the known methane slips attributed to use of LNG, LNG facilities pose a risk of explosion and fires. In June 2022, Texas's Freeport LNG facility experienced its fourth safety incident reported to the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) since mid-2019 at the plant, which began operations in 2008 as an import terminal. The site began exporting gas in 2019. Regulators acknowledge that LNG facility explosions can cause "mass destruction because facilities handle immense amounts of natural gas that can become explosive when exposed to the atmosphere." In 2014, five workers were injured in an explosion at a liquefaction plant in Washington State that caused \$72 million in damage and led to the evacuation of a 2-mile radius around the plant.

LNG is a dead end for investments.

Maritime leaders such as Target, Amazon, and IKEA are embracing reality and made landmark commitments as part of the Aspen Institute's [Cargo Owners for Zero Emission Vessels \(coZEV\) initiative](#) to end their use of LNG for maritime decarbonization. The World Bank also urges governments against LNG as a marine fuel. According to the University College London, LNG deployment could leave businesses with up to [\\$850 billion in stranded assets by 2030](#) as governments institute zero-emission ship standards.

The Port of Long Beach must prioritize electrification and zero-carbon, zero-emission fuels for the hardest to abate sectors (like cargo shipping) in order to reduce the air quality and climate impacts. With the right market signals from ports investing in electrification and zero-emission fuel bunkering, shipbuilders, ship owners and shippers will have no choice but to retrofit and transition their fleets to run on energy-saving technologies, wind-assisted propulsion, renewable electricity, zero-emission fuels, batteries, and fuel cells.

Investing in LNG would derail the City and Port's commitments to date.

The City and Port of Long Beach have made several commitments to reducing port pollution and transitioning to zero-emission shipping. In addition to the San Pedro Bay Ports' Clean Air Action Plan (CAAP), both Ports of Long Beach and Los Angeles have committed to establish a green shipping corridor between the San Pedro Bay Ports and Shanghai. Additionally, both Los Angeles and Long Beach city councils adopted resolution calling for their major maritime importers to commit to making all port calls to the San Pedro Port Complex 100% zero-emission ocean shipping by 2030.

If the San Pedro Bay Ports expect to deliver on these commitments, eliminate pollutants for their neighboring communities, and lead on decarbonizing the ocean shipping industry, LNG bunkering must be off the table.

The Port will receive funding from Biden administration's Inflation Reduction Act and the bulk of California's \$1.2 Billion Port and Freight Infrastructure Program to combat supply chain issues and modernize port infrastructure. **We urge the Port to utilize that funding to:**
(1) modernize berths for container ships and for CARB shore power requirements and
(2) use it to clean up, reduce and eliminate pollution in the port.

The Port of Long Beach has a stated goal to become the world's first zero-emission port. To achieve this goal, LNG bunkering cannot be part of its plans—now or ever. We strongly urge you to take a stand for our collective future by announcing that you will not attend or speak at the LNG Bunkering Summit in Washington, D.C. next month, and we urge the Port to take immediate action to accelerate the industry's transition to zero-emission shipping.

Sincerely,

**Pacific Environment
Sierra Club
West Long Beach Association
East Yard Communities for Environmental Justice**

Studies on why LNG is harmful for our environment and how investing in LNG will create stranded assets for ports and businesses:

Energy Institute at the University College London, [*The shipping sector's costly affair with LNG as a marine fuel*](#)

The study quantifies the financial losses that would likely be incurred by the world's growing fleet of LNG ships as policymakers globally align with the Paris Agreement's goal of keeping global warming under 1.5 degrees Celsius above pre-Industrial levels:

- This study finds the world's rapidly growing fleet of ships that can run on liquefied natural gas (LNG) are at risk of financial losses of \$850 billion by 2030.
- If policies that incentivize shipping to decarbonize in line with the Paris Agreement were in place by the end of the decade, the LNG-capable fleet would compete against zero-emission shipping. While policy and competition would affect all ships built to use fossil fuels, the analysis suggests that more expensive LNG-capable assets (also known as LNG dual-fuel) would see reductions in their value to match the value of similar aged but lower cost conventional vessels designed to use fuel oil.
- **This study argues that governments should not use public funding to exacerbate the creation of stranded value and identifies methods that investors can use to identify the risks posed by climate change on shipping assets.**

International Council on Clean Transportation (ICCT): [*Comparing the Future Demand for, Supply Of, and Life-Cycle Emissions From Bio, Synthetic, and Fossil LNG Marine Fuels in the EU*](#)

- The report estimates demand for LNG used by ships on voyages to, from, and between EU ports in 2030, including bio and e-LNG (“renewable” LNG).
- Using 100% fossil LNG **would triple well-to-wake greenhouse gas emissions** from LNG ships projected to be on the water globally between 2019-2030.
- Even using 100% “renewable LNG” **would double absolute methane emissions** between 2019-2030.
- Meanwhile, the IPCC has indicated that emissions of short-lived climate pollutants such as methane need to be reduced by one-third from 2019 levels by 2030 to limit warming to 1.5°C.
- **University of Maritime Advisory Services at the University College London: [*LNG as Marine Fuel in the EU*](#)**
- One of the aims of the study is to ascertain the cost/benefit of investing in LNG bunkering infrastructure from a GHG abatement perspective (invested \$/ton CO₂ abated).
- **The study found that there is no significant CO₂-equivalent reduction achieved through the use of LNG as marine fuel** relative to the reduction required to achieve the International Maritime Organization (IMO)’s 2050 objectives.

- Reaching Paris temperature goals is only possible with a switch to increased use of non-fossil fuel sources (non-fossil hydrogen, ammonia, battery electrification) from 2030 and with rapid growth thereafter.
- **There is a very uncertain future demand for LNG as a marine fuel over the next 10 years.** On the one hand, it is an option for complying with the 2020 sulfur cap, but as it cannot enable the GHG reductions that have been committed to in the IMO's initial strategy for GHG reduction and the Paris Agreement temperature goals more generally, it is clear that its role can only be transient and not transitional.
- There is no development of a significant market for LNG as a marine fuel in scenarios modeled, as these new fuel sources require significant demand growth from 2030 at the latest to meet the GHG reduction objectives.

International Council on Clean Transportation (ICCT): [*The Climate Implications of Using LNG as a Marine Fuel*](#)

- This study compares the life-cycle GHG emissions from LNG, including upstream emissions from leakage during extraction, processing, and transport and downstream emissions from combustion and unburned methane (aka “methane slip”), to those of traditional marine fuels: heavy fuel oil, very low sulfur fuel oil, and marine gas oil (MGO).
- LNG is mostly methane, a potent GHG that traps more than 80 times more heat in the atmosphere than the same amount of CO₂ over 20 years.
- There is no climate benefit from using LNG, regardless of the engine technology, when evaluating its use over a 20-year time frame.
- The most popular LNG marine engine—low-pressure dual fuel (LPDF), medium-speed, four-stroke—is also the leakiest. **Using LNG, this technology emitted 70% to 82% more life cycle GHGs than MGO.**
- Continued investment in LNG infrastructure on ships and onshore risks making it harder to transition to zero-emission vessels in the future. Investments should instead be focused on technologies that reduce total life-cycle GHG emissions, including energy-saving technologies, wind-assisted propulsion, zero-emission fuels, batteries, and fuel cells.

The World Bank: [*The Role of LNG in the Transition Towards Low and Zero Carbon Shipping*](#)

- Questions this report attempts to answer:
 - What would the role of liquefied natural gas (LNG) as a bunker fuel in the years 2020–2050 look like?
 - Offering significant air quality benefits, could LNG also contribute to the targets set by Initial IMO GHG Strategy and the sector's transition toward low- and zero-carbon shipping?

- The conclusions of this report have been developed through a logic that starts with the Paris Agreement's temperature goals, considers shipping's GHG emissions trajectory and the associated fuel mix that would be required to meet those goals, and assumes that appropriate policy would be introduced to achieve those outcomes. The Initial IMO GHG Strategy is consistent with this logic. Within this context, **there is consensus across the literature and industry that LNG cannot form a large proportion of the bunker fuel mix in 2050 due to its carbon intensity**

International Energy Agency's [Net Zero by 2050 report](#)

- **A key finding of the landmark report is that no new gas projects can be started if the world is to align with limiting warming to 1.5 degrees.**
 - 'Building on the IEA's unrivaled energy modeling tools and expertise, the Roadmap sets out more than 400 milestones to guide the global journey to net zero by 2050. These include, from today, **no investment in new fossil fuel supply projects**, and no further final investment decisions for new unabated coal plants. By 2035, there are no sales of new internal combustion engine passenger cars, and by 2040, the global electricity sector has already reached net-zero emissions.'