From: Stacy Oaks <stacy@350seattle.org>
Sent: Tuesday, December 10, 2019 9:31 AM

To: Commission-Public-Records; Merritt, Mike; Pritchard, Aaron; Felleman, Fred;

Steinbrueck, Peter; Bowman, Stephanie; Calkins, Ryan; Gregoire, Courtney

Subject: [EXTERNAL] LNG as Shipping Fuel - IMO Findings

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Hello all,

Please read the attached IMO report completed September of this year, that published the findings of a study group tasked with analyzing Liquefied Natural Gas(LNG) as a shipping fuel intended to lessen the carbon footprint of the maritime industry.

The report is just 5 pages long, offers 19 points, and is very clear of their findings--"LNG is not a climate solution for shipping".

I hope that as new information like this is put forth, that the Port of Seattle is adjusting strategies, future plans, and ghg reduction steps. Specifically, the Maritime Blue 2050 Strategy for WA state seems to rely heavily on transitioning to LNG powered vessels as a way to clean up the industry, falsely putting LNG in with solar, wind, better vessel design etc. These findings should also be considered as the T46 cruise ship expansion analysis continues--making sure best data is used, and not under reported or based on industry data as this IMO report mentions in the section on "Methane Slip from Marine Engines" when calculating the environmental impacts, as well as perhaps stipulating that any cruise corporation hoping to make Seattle it's home plans to use MGO instead of HFO or LNG on their entire cruise route.

Thank you for your time today. Below are some of the highlights of this report.

Stacy Oaks 350 Seattle

- "13. LNG is still a fossil fuel and as such has no long-term future if the Paris Agreement goals, which assume emissions go to zero, are to be met."
- "14. In the shorter-term LNG is still a problem because only in the best-case scenario may it result in lower emissions than MGO/HFO, and even in that case by only a small margin."
- "15. Additionally if we take into account the global warming potential of methane over a 20-year time frame in place of the 100-year timeframe the results assessing LNG for climate impact are much worse. This is due to the fact that uncombusted methane has the highest global warming impact in the first years after it has been emitted."
- "16. Even if LNG's methane leakage and slip issues were to be resolved, the widespread adoption of methane as a marine fuel would result in extensive stranded assets as shipping decarbonizes and other zero-emission fuels take over."
- "17. LNG has substantial methane emissions throughout the supply chain (well to wake), which means that even with the use of high-pressure engines, the lower methane slip, the overall lifecycle analysis would show little or no carbon savings and, in many cases, worse performance compared to HFO/MGO."

"18. Instead of engaging in a complicated and ultimately unproductive shift from one fossil fuel to another, activities under the IMO GHG strategy should focus on delivering short term emissions reductions in the existing fleet and speeding up the development of genuine low carbon fuels and the roll out of zero emissions vessels."