

GAS IS NOT A BRIDGE FUEL

Testimony to Portland City Council

Angela van Patten

June 10, 2015

Good morning. Thank you for this opportunity to speak. My name is Angela van Patten. I've been a resident of Southeast Portland for 26 years, have worked in the social services field, and have raised two daughters, including Caroline, who is here today, who received much of their education in Portland Public Schools.

I'm here to comment on the uncertain status of the Pembina propane terminal proposal, and related issues up for Council in the near term. Specifically, I urge Council members to seek a binding Climate Action Plan, which includes gases, including propane, as listed fossil fuels not bridge fuels, and that our city make strides toward divestment from these fuels.

Specifically, I'd like to discuss two erroneous assumptions that come into play in these considerations that need to be made explicit:

1. That gasses can be considered bridge fuels, and
2. That we have more time than we actually do to address global warming and the resulting climate chaos.

GASES ARE NOT BRIDGE FUELS. HERE ARE TWO REASONS

1. Lifecycle greenhouse gas emissions from natural gas are looking as damaging to the climate as coal.

Comparing the relative climate impacts of different combustible fuels is not as easy as it may first seem, even when the units of usage are made equivalent and the different types of greenhouse gases each fuel emits upon combustion are expressed in terms of their carbon dioxide equivalency (1).

By the strict, but distorted, standard of looking at which fuels burn the cleanest, in that they emit the lowest rates of pollutants such as carbon dioxide, carbon monoxide, particulates, etc. per unit of energy burned, gases such as methane and propane burn cleaner than oil and coal in that they have high energy outputs relative to low rates of combustion pollutants going into the atmosphere (2)

The problem is these measurements are only a small piece of the bigger picture. Greenhouse gases are released at all stages of a fuel lifecycle: exploration, extraction, storage, transportation, and end use. Even when looking at one fuel, conditions in each of these arenas vary considerably, let alone comparing between fuels.

Propane is a complex fuel to analyze in that it is produced as a by-product of one of two other processes: natural gas processing and crude oil refining.

Just to serve as an example of the challenges of gaining a full picture, the natural gas industry has been opaque in releasing methane leakage figures. In a recent pair of studies, described in Scientific American, a researcher at NOAA found natural gas fields may, on a global basis, be leaking enough methane to make the fuel as damaging as coal to the climate over the next few decades (4)(8).

Worse, in terms of the United States contribution to the global problem, is that some of its oil and gas fields are releasing more methane than the industrial average for the rest of the world (4)(8).

2. Economically, gas exports fail as a bridge fuel on a number of fronts.

An international team of scientists led by Haewon McJeon, an economist at the Department of Energy's Pacific Northwest National Laboratory, looked at the effect of a projected increase in worldwide natural gas usage. (Greater quantities of propane will be produced as a by-product of this increase.) The team did five independent energy-economic-climate analyses (5)(6)(8).

The market model showed that unless there were explicit, worldwide public policies expanding and protecting renewables, the political/economic infrastructure for pushing gas would prevail. The model showed that long-term (25-year) gas expansion, made possible through the use of fracking, would escalate the climate crisis because gas replaces other fossil fuels and also renewable energy (5)(6)(8).

One of the most insidious ways fossil fuel products, and the infrastructure development to support them, affect the climate is contractual lock-in.

Especially now that most of the easily extractible fossil fuels have peaked and are dwindling, very advanced technology is being deployed to bring to the surface fuels that heretofore were unavailable. Often these fuels require a great quantity of energy to be put into a relatively smaller energy yield ratio. Thus, these projects are expensive, and require long, 20-year and greater contracts as, to quote Naomi Klein, "these investments won't be recouped unless the companies that made them are able to keep extracting for decades, since the upfront costs are amortized over the life of the projects (7)."

There are many more aspects to this contractual lock-in, including fiduciary duty to stockholders, expenditures on lobbying, campaigns, and even more cunning efforts toward subverting the pillars of democracy, in order to insure fossil fuel products retain primacy in the economy for decades to come. The potential passage of the TPP will exacerbate the problem.

These are just some of the reasons fossil fuel infrastructure proposals are a lock-in to our present collision course with climate chaos, rather than a bridge to a sustainable energy future.

MYTH WE TELL OURSELVES: WE HAVE MORE TIME THAN WE ACTUALLY DO TO ADDRESS GLOBAL WARMING

As a people who've benefitted to varying degrees from an industrial economy based on fossil fuels, we have a moral obligation to face the climate crisis, and do what is necessary to keep younger generations from having to do all the heavy lifting of making the switch to renewables. This is especially as they will be attempting to do so in a degraded environment with climate chaos further advanced.

As a recent report by the Oregon Anti-LNG Leadership Coalition entitled "Climate Impacts of Natural Gas Production and LNG Export" states: "Tragically, we do not have a century to make changes. The next ten to twenty years are critical, and methane emissions factor heavily into addressing greenhouse gas pollution in this near term. The IPCC projects that warming increases may reach 3.6F (2C) within decades (8)."

I thank Mayor Hales and Commissioner Fritz for taking a stand against approval of the proposed Pembina terminal, and urge fellow commissioners to do likewise. Additionally, I urge that Council members look toward a binding Climate Action Plan with a specific inclusion of gases, including propane, as fossil fuels not bridge fuels, and that our city actively pursue divestment from these fuels.

Thank you.

REFERENCES

1. www.epa.gov/climateleadership/documents/emission-factors.pdf
2. "Environmental Impacts of Natural Gas," Union of Concerned Scientists.
3. "Propane Production and Distribution," Alternative Fuels Data Center, U.S. Department of Energy.

4. Gayathri Vaidyanathan, "Leaky Methane Makes Natural Gas Bad for Global Warming," Scientific American, June 26, 2014.
5. Mary Beckman, "A global natural gas boom alone won't slow climate change," Pacific Northwest National Laboratory, U.S. Department of Energy; October 15, 2014.
6. Haewon McJean, et al, "Limited impact on decadal-scale climate change from increased use of natural gas," Nature, October 15, 2014.
7. Naomi Klein, This Changes Everything, New York, Simon and Schuster, 2014; pages 143-149.
8. Oregon Anti-LNG Leadership Coalition, "Climate Impacts of Natural Gas Production and LNG Export; A Synopsis of Current Science," Creative Commons, Edition 1.3; November 15, 2014.

Moore-Love, Karla

From: April Smith <aprilcatherine1957@gmail.com>
Sent: Thursday, June 04, 2015 7:56 AM
To: Adriana Voss-Andreae
Cc: Parsons, Susan; Moore-Love, Karla
Subject: Re: June 10th City Council testimony switch

Yes I will be attending and speaking regarding Pembina. Thank you April Smith

Sent from my iPhone

On Jun 3, 2015, at 11:06 PM, Adriana Voss-Andreae <vossandreae@gmail.com> wrote:

Hello Sue, Karla,
Please transfer my allotted testimony time on June 10th to April Smith.
Thanks,
Adriana

Adriana Voss-Andreae, MD PhD
350PDX, Chair
Mobile (503) 329-5302
Concerned about Climate Change?
Want to do something about it? Join us at 350PDX.org
Find local affiliates across Oregon at 350 Oregon.org
Find local affiliates in other states or globally at 350.org
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Request of April Smith to address Council regarding Pembina (Communication)

JUN 10 2015

PLACED ON FILE

Filed JUN 05 2015

MARY HULL CABALLERO
Auditor of the City of Portland

By  Deputy

| COMMISSIONERS VOTED AS FOLLOWS: | | |
|------------------------------------|------|------|
| | YEAS | NAYS |
| 1. Fritz | | |
| 2. Fish | | |
| 3. Saltzman | | |
| 4. Novick | | |
| Hales | | |