



SIERRA CLUB

Connecticut Chapter
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April 26, 2022

Planning & Zoning Commission
250 Constitution Plaza #4
Hartford, CT 06103
Via email: oneplan@hartford.gov

Dear Members of the Planning and Zoning Commission,

The Sierra Club is committed to defending everyone's right to a healthy world by tackling the serious challenges of a warming climate and unprecedented levels of pollution. On behalf of the Sierra Club Connecticut Chapter and our more than 40,000 members and supporters in the state, I write today regarding the proposed easement at 415 Granby Street.

In light of the serious harms that gas expansion poses to public health and the climate, the Sierra Club opposes this easement. Hartford's Plan of Conservation and Development calls on the city to "Promote a more sustainable environment that improves public health, advances the economy, and promotes social equity". Yet, the Staff Report¹ on this proposal provides no information about the concerns for public health and the climate that are presented by increasing use of methane gas. We have outlined these concerns, and others, below.

Methane gas leaks from pipelines in Hartford are pervasive:

In 2016 and 2019, Sierra Club Connecticut conducted two research studies of methane gas leaks in Hartford. Both studies found active methane leaks throughout the city of Hartford. In 2016, a total of 716 distinct methane leaks over 225 road miles in Hartford was detected, resulting in a leak frequency of 3.2 leaks per road mile.² The 2019 study covered fewer road miles, but found 4.3 leaks per mile.³ The leak frequencies found in 2016 and 2019 compare to 4.3 leaks per mile previously found in Boston, Massachusetts (MA) (Phillips, et al. 2013).

A preliminary estimate of methane leaks in Hartford from the 2016 study is 0.86 metric tonnes leaked per day (or 313 metric tons per year; a metric tonne is 2,204.6 pounds, a U.S. ton is 2,000 pounds), equivalent to 42,840 cubic feet per day of natural gas. This leakage rate represents an equivalent daily gas consumption of approximately 214 U.S. households.

The 2019 study showed no improvement; in fact, the results support that methane leaks remain prevalent and persistent in Hartford.

Research elsewhere confirms widespread leakage from pipelines. In Boston, a 2021 study⁴ showed methane being released from the gas system into Boston's atmosphere is six times higher than estimates used by the Massachusetts Department of Environmental Protection. The Boston study showed total supply chain losses of 3.3 to 4.7% which significantly increases the climate impacts of fossil gas compared to Environmental Protection Agency estimates.

¹http://meeting-info.s3.amazonaws.com/uploads/2/30/1728/415granby_COMM-2022-0604_StaffReport_8-24Reviewac.pdf

² [Hartford, Connecticut Mobile Methane Leak Survey, 2016](#)

³ [Connecticut Mobile Methane Leaks Survey and Analysis Results, 2019](#)

⁴ [Majority of US urban natural gas emissions unaccounted for in inventories](#)



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A study of gas leaks from pipelines commissioned by the DC government in 2021 identified 3,346 locations with methane at concentrations higher than ambient background levels.⁵ Neighborhood researchers in Washington DC found hundreds of methane gas leaks across the city in a citizen science project conducted in 2021 and 2022.⁶

Allowing more pipelines to be built in light of this data is not advisable.

Gas leaks contribute to climate change

When released directly into the atmosphere, methane is 84 to 87 times more powerful than carbon dioxide as a global warming agent.⁷ When combusted, methane gas produces carbon dioxide, the most common greenhouse gas, as well as nitrogen dioxide, a precursor to ozone.⁸ This project will increase the threat of climate change.

Public health threat of climate change and methane gas

Over 200 medical journals⁹ and 100 health organizations¹⁰ recognize that climate change is a public health emergency. Gas appliances fill homes with many of the same pollutants as car exhaust – carbon monoxide, nitrogen dioxide, particulate matter, and formaldehyde.¹¹ Because of this, indoor air is often more polluted than outdoor air.¹² Health impacts stemming from elevated nitrogen dioxide exposure include:

- Aggravated respiratory symptoms and higher susceptibility to lung infections¹³
- 42% increased risk of developing asthma symptoms¹⁴
- IQ and learning deficits in children¹⁵

Asthma rates among children living with gas stoves are comparable to those of children living with cigarette smokers, with one study attributing 12% of all childhood asthma to pollution from gas stoves.¹⁶ Children in Hartford are more than 3 times more likely to be hospitalized (41.5 per 10,000 population vs. 12.7 per 10,000 population) or visited an emergency department (241.7 per 10,000 population vs. 61.3 per 10,000 population) for their asthma when compared to residents from the rest of Connecticut.¹⁷

⁵ [2021 Fugitive Methane Emission Survey of the District of Columbia For the District of Columbia Department of Energy and Environment, October 31, 2021](#)

⁶ [Neighborhood Researchers Find Hundreds of Methane Gas Leaks Across DC](#)

⁷ [Methane Matters: Scientists Work to Quantify the Effects of a Potent Greenhouse Gas, NASA Earth Observatory, 2016](#)

⁸ [Air Quality & Health, World Health Organization, 2022](#)

⁹ https://www.nejm.org/doi/full/10.1056/NEJMe2113200?query=featured_home

¹⁰ <https://climatehealthaction.org/>

¹¹ [Gas stoves can generate unsafe levels of indoor air pollution, Vox, May 11, 2020](#)

¹² [Gas Stoves: Health and Air Quality Impacts and Solutions, RMI, 2020](#)

¹³ [Gas Stoves: Health and Air Quality Impacts and Solutions, RMI, 2020](#)

¹⁴ [Gas Stoves: Health and Air Quality Impacts and Solutions, RMI, 2020](#)

¹⁵ [Effects of prenatal exposure to NO2 on children's neurodevelopment: a systematic review and meta-analysis, Environmental Science and Pollution Research International, April 20, 2020](#)

¹⁶ [Kicking the Gas Habit: How Gas is Harming our Health, Climate Council \(Australia\), May 2021](#)

¹⁷ [Asthma Data Fact Sheets for the Five Largest Cities in Connecticut 2009](#)



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Fuel cells powered by methane gas are dirty energy

The easement is for a methane gas pipeline that will feed a fuel cell at the University of Hartford. The Staff Report notes that the fuel cell will provide “resiliency.” Resiliency provided by a gas powered fuel cell comes at the expense of the environment, and of renewable alternatives. According to the Connecticut Department of Environmental Protection analysis of a similar but separate fuel cell project, the use of a fuel cell would increase carbon dioxide emissions when compared with the expected emissions from the grid over the next 20 years.¹⁸ Additionally, methane gas fuel cells displace true renewable energy projects, such as solar and battery storage, which would provide the resiliency that this project aims to achieve while lowering greenhouse gas emissions, and avoiding the need for an easement altogether.

Environmental justice concerns

The location of this project raises environmental justice questions. Hartford residents, including students at Weaver High School, will bear the burden of the construction noise and inconvenience along with any methane leaks from the proposed pipeline. Not enough information was given about the alternative locations or why this Hartford location was chosen instead. The public should have a better understanding of the possible alternatives, including locations in West Hartford.

Residents of Hartford already bear a disproportionate exposure to pollutants from power plants and highways, and should not be the default choice for more polluting sources.

Flood zones and pipelines

The maps in the Staff Report show that the proposed pipeline will come in contact with flood zones. While this does not impact the easement area, it is important to note that severe flooding can adversely impact the safe operation of a pipeline. This is a concern due to increasing flooding due to climate change being experienced in Hartford.

Renewable alternatives

To meet the challenge of climate change and to reduce harms to people from unprecedented levels of pollution, decision-making bodies like the Planning and Zoning Commission must stop approving projects that will expand the use of fossil fuels and start decreasing their use. As noted above, there are alternatives - solar power and battery storage - that are cost-effective and ready to be deployed for projects such as this one.

Thank you for your attention to these concerns about gas expansion in Hartford.

Sincerely,

Alycia Jenkins, Organizer

¹⁸ See, PURA review of the combined heat and power project solicitation pursuant to Conn. Gen. Stat. § 16-258e, Docket 18-08-14, Brief of the Department of Energy and Environmental Protection, June 7, 2019 at 12.



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Cc: Energy Improvement District