Public Comment on H.51, H.175, H.214 Karen Saunders April 21, 2019

To the Members of the House Committee on Energy and Technology:

I am writing in support of the following bills that would curb or ban the construction of any new fossil fuel pipelines in Vermont.

-H.51: Introduced by Rep. Mary Sullivan, this would ban the construction of any new large-scale fossil fuel infrastructure in Vermont.

-H.175: Introduced by Rep. Mari Cordes, this would ban the use of eminent domain (condemning people's land) to construct new fossil fuel projects.
-H.214: Introduced by Rep. James Masland, this would require the Public Utility Commission to consider groundwater contamination and leakage from natural gas projects before granting a Certificate of Public Good to build them

I have concerns about the safety of fossil fuel infrastructure, based partly on the incidents around the country in which gas pipelines have leaked, caught fire, and even exploded. Just in the years 2010-2013, there were 1,400 pipeline spills and accidents in the U.S., according to a Wall Street Journal article by Alison Sider, published in 2014. As you know, there were multiple explosions in the gas lines of three Massachusetts towns in September, 2018. Even new pipelines have been known to leak and explode. Vermont's newest pipeline, Vermont Gas' ANGP, is currently under investigation over safety and construction concerns, including everything from missing documentation to missing components of the pipeline itself. This new pipeline may be shut down as a result.

I have further concerns around the contribution of natural gas to climate change. The fracked gas that would be carried by new infrastructure is primarily methane. We tend to think only of CO2 emissions as contributing to climate change, but methane (CH4) remains in the atmosphere for longer than carbon dioxide and its molecules hold more heat. Over a 100-year period, methane captures and holds 28 times as much heat per mass unit as carbon dioxide.

The costs of building and replying on gas pipelines, both immediate and long-term, are exorbitant. We know that Vermont Gas' pipeline nearly doubled in cost from \$86m to \$165m, all to serve about 3000 customers. But natural gas also carries a social cost related to its role in climate change. In comparison to carbon' cost of \$38 per ton, Methane (the primary component of natural gas) carries a cost of \$2,900 per ton. There is a further social cost paid by those who live and work near fracking sites.

Also important to consider is the role of increased fossil fuel infrastructure in diverting essential resources from the transition to clean and sustainable energy, as well as allowing us to think, as a society, that we have more time than we actually do have to make that transition.

With regard to H. 175, the use of eminent domain to take land for fossil fuel infrastructure that benefits a private company is wrong. The eminent domain threats made by Vermont Gas during the construction of their pipeline caused great burdens to Vermonters. This should not happen again.

Finally, although there is not a government limit on the amount of methane in drinking water, it can and does cause problems with well systems when it enters groundwater through pipeline leaks, because of the gas bubbles it forms in water. Further, when water carrying methane reaches air (either as a faucet is turned on, or when groundwater surfaces at a seep or spring), the methane escapes as gas that carries the potential for explosion.

Please take heed of the history of gas pipeline accidents in our country and around the world, as well as the science of climate change, as you consider these three important bills.

Thank you, Karen Saunders Brattleboro, Vermont PhD Candidate in Environmental Studies Antioch University New England