

Warrant Article #13

By Coralie Cooper

As a member of the Clean Energy Future Committee and Mothers Out Front Arlington, I am writing in support of warrant article 13.

Climate change is caused by the release of greenhouse gases (GHGs) – including carbon dioxide (CO₂) and other gases, such as methane into the atmosphere - largely from fossil fuel combustion. The United Nations Intergovernmental Panel on Climate Change has concluded that we must reduce GHG emissions to near zero if we are to avoid catastrophic climate change.¹

In 2000, the Board of Selectmen pledged to adopt a climate action plan, and since that time, the Town has taken carefully considered, common sense steps to reduce GHGs and fuel consumption.² In the process it has lowered operating costs for the Town (through the installation of LED street lights, improved insulation in buildings, and improved heating, ventilation, and air conditioning systems for example). Most recently, the Town has engaged in the development of fully electric new high school which will significantly reduce energy consumption. In 2018, Arlington committed to reach net zero GHGs by 2050. This target is consistent with the Commonwealth of Massachusetts' 2008 Global Warming Solutions Act that requires a statewide reduction of GHGs between 10 and 25 percent by 2020 and at least an 80 percent reduction by 2050. Warrant article 13 is an additional common sense step the Town can take to further reduce GHG emissions.

In Arlington, approximately 60 percent of GHG emissions are released from buildings, making buildings the single largest GHG emitting sector in the Town. According to the U.S. Department of Energy, as much as 75 percent of residential building GHG emissions come from on-site combustion of fossil fuels for space, water heating, and other uses.³ Most Arlington heating systems use either #2 fuel oil or natural gas. The installation of new fossil fuel systems in new construction and in gut renovations in the town is a serious concern. The installation of this infrastructure will "lock in" GHG emissions for decades that could otherwise be avoided with the installation of cleaner thermal heating systems. Fuel oil, natural gas, propane, and other fossil fuel systems last approximately 15 years and over their lives emit many tons of GHGs.

There are commercially available and cost-effective alternatives to the use of fossil fuel heating systems in our homes: air source and ground source heat pumps. The use of heat pumps result in immediate, substantial reductions in GHG emissions. These systems provide a level of heating and comfort equivalent to fossil fuel systems. Furthermore, as emissions associated with electricity generation are reduced, electrically powered heating systems will get cleaner. The Massachusetts Department of Environmental Protection estimates that electrical grid-related GHG emissions have dropped approximately 50 percent over the past 20 years, and are projected to continue to drop substantially in coming years.⁴ Thus, a heat pump system installed today will be cleaner next year and the year after. A fossil fuel system will continue to emit at high levels, and will even emit more with system deterioration over time.

For the above reasons, we need to take the important step to eliminate combustion-related GHGs emissions in new construction and gut rehabilitation. I strongly support warrant article 13 and thank the Board for the opportunity to provide this letter of support.

¹ IPCC, "Climate Change 2014: Mitigation of Climate Change," available at <https://www.ipcc.ch/report/ar5/wg3/>

² <https://www.mass.gov/files/documents/2017/10/19/green-communities-case-study-arlington.pdf>

³ U.S. Department of Energy, 2011 "Buildings Energy Data Book," March, 2012

⁴ Mass.gov, GHG Emissions and Mitigation Policies, available at <https://www.mass.gov/info-details/ghg-emissions-and-mitigation-policies#electricity-generation->