

April 4, 2022

Senator Cynthia Stone Creem, Chair
Senate Committee on Global Warming and Climate Change
24 Beacon St. Room 312-A, Boston, MA 02133

RE: The Future of Gas Virtual Hearing

Thank you, Chair and members of the committee for the opportunity to provide testimony. My name is Jamal Lewis, and I am a Director of Policy for [Rewiring America](#), a national organization dedicated to economy-wide electrification. Rewiring was launched after our co-founder Saul Griffith, a MacArthur genius award recipient, was tasked by the Department of Energy to trace the country's emissions down to a 1/10th of 1 percent of all energy consumption. This detailed analysis revealed that 87% of our national emissions derive from the energy sector, and that 42% of these emissions can be traced back to the decisions made at the kitchen table by all of us. Simply put, these decisions are about the one billion machines we use to cook our food, drive to work, and heat and cool our homes and water. We must electrify these machines to have a shot at limiting warming to 1.5°C, which scientists agree will prevent the worst impacts of climate change.

The good news is that there are currently clean, electric versions of these machines available on the market today. These machines include heat pump heating and cooling systems, heat pump water heaters, heat pump clothes dryers, and induction stoves. When consumers choose to electrify, particularly their homes, the benefits are immense. Burning fossil gas in buildings is dangerous to our health. Children living in a home where gas is used for cooking have a 42% increased risk of having asthma and even when a gas appliance is turned off, it can still leak and expose people to toxins like benzene, which cause cancer. In rare but devastating cases, houses can even explode from gas, as occurred with 40 homes in the Merrimack Valley in 2018.

There are also climate benefits in moving away from gas. By switching all Massachusetts households to these electric technologies, we estimate that about [5.33 metric tons of CO2 emissions can be avoided annually](#). Scientists at Harvard have found that Massachusetts has some of the leakiest gas infrastructure in the country, resulting in [leakage rates](#) of almost 3%, making gas [nearly as dirty as coal](#) in terms of greenhouse gas pollution. Let me repeat that: in Massachusetts, gas is nearly as dirty as coal emissions-wise.

In addition, [at least 94 percent of Massachusetts households](#) – almost half of which are low- and moderate-income households – would save money every month on their energy bills by going electric. Statewide, families would cumulatively save \$876 million a year. Further, when we use clean, electric technologies, households are more insulated from price hikes. This last winter, homes using inefficient fossil fuel appliances saw costs go up by over [\\$600](#). In homes with efficient electric heat pumps prices only increased by \$76—about one-tenth as much. Massachusetts residents will continue to pay the price with their health and the pocketbooks if we continue to power our homes with volatile and expensive fossil fuels.

Two years ago, Massachusetts committed to achieving net-zero emissions by 2050. This goal will not be met if the state's gas companies are allowed to continue business as usual by investing in expanding the gas system. Any new or replaced gas infrastructure will either be in use for decades, leading to greater

warming and associated economic damages, or will need to be retired before they are fully depreciated leaving many Massachusetts residents with stranded costs. The same concept applies to gas-powered cars and appliances, which can have long useful lives of [up to 25 years](#). In fact, decisions to replace these machines are typically made in emergencies when one of these machines, like a furnace, breaks. It is at this point of replacement where we need to electrify - starting today.

Fortunately, the demand for gas continues to decrease. According to the Energy Information Agency, the proportion of all-electric homes in every region of the country has [steadily increased since 2005](#) and electric vehicles have experienced similar increases. The reduced demand for gas means that we need less investment in the status quo and more investment in the production, distribution, and installation of renewable energy on the supply side paired with efficient electric technologies on the demand side.

This is a critical moment for Massachusetts. The decisions you make within this case will determine whether Massachusetts residents are able to access clean, electric energy while saving money and maximizing health.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Lewis".

Jamal Lewis
Director of Policy Partnerships and Equitable Electrification
Rewiring America