



Testimony submitted to the Joint Committee on Telecommunications, Utilities and Energy  
In support of H2849/S1940 – An Act for utility transition to using renewable energy (FUTURE)  
By Launa Zimmaro, LWVMA Energy and Climate Change Specialist  
November 12, 2019

On September 13, 2018, multiple explosions rocked the Merrimack Valley, displacing thousands of residents, disrupting families and businesses across Lawrence, Andover and North Andover for weeks, and resulting in the death of 18-year-old Leonel Rondon,<sup>1</sup> killed by falling debris while sitting in a car in a friend's driveway. The explosion was the result of over-pressurized gas mains, caused by "human error" while Columbia Gas crews were replacing old cast-iron pipelines.

On September 27, 2019 – just over a year after those tragic events– a major gas leak in Lawrence forced the evacuation of hundreds of residents. Once again, the massive leak was due to "human error." Contractors working for the city inadvertently closed a gas valve that should have been disabled as part of pipeline reconstruction in 2018, puncturing a gas main.<sup>2 3</sup>

Massachusetts has one of the oldest gas distribution systems in the country; leaks are common-place and recurring because of failing cast-iron pipelines. Gas utilities estimate that the cost of replacing leaking and leak-prone pipelines will be over \$9 billion – a cost that will be borne by ratepayers. Natural gas is dubbed a "clean fuel," but that is in comparison to coal or oil at the point of combustion. Natural gas is a fossil fuel. It is volatile and exacts enormous environmental and health costs through its extraction processes, distribution, and use.

The world has been alerted to the urgent need to transition from fossil fuels to renewable fuels to reduce atmospheric carbon pollution disrupting our climate system. This is an essential step if we are to soften the increasingly severe impacts related to climate change that we are already experiencing and that are projected to become far worse. While we have regulations in place to address emissions from the electric utilities through the Regional Greenhouse Gas Initiative, and efforts are underway to curb emissions from the transportation sector (representing 43% of emissions in New England) through the regional Transportation and Climate Initiative, we must also address the 40% of emissions from the building sector. H2849/S1940 represents an important step in tackling that 40% of emissions. Half of the housing/building stock in Massachusetts is heated by natural gas. Natural gas emits methane, a potent greenhouse gas. Just 7% of gas leaks emit half of all methane emissions. If natural gas was once a bridge to the future, we have reached the end of that bridge.

H2849/S1940 provides a path for heating and cooling our homes and buildings affordably, safely and comfortably and offers a solution that works for gas utilities, residents, and businesses in the

---

<sup>1</sup> Family of Lawrence teen killed in Merrimack Valley explosions settles with Columbia Gas, July 9, 2019. Boston Globe: <https://bit.ly/34kBnDJ>. Accessed 10/10/19.

<sup>2</sup> Federal Investigators Pinpoint What Caused String Of Gas Explosions In Mass, NPR: November 16, 2018. <https://n.pr/2JGfjCe>. Accessed 10/9/19.

<sup>3</sup> Cause of Lawrence Gas Leak Identified After Hundreds Evacuated. September 27, 2019, NBC Boston: <https://bit.ly/2C58Sha>. Accessed 10/9/19.

Commonwealth by permitting gas utilities to distribute geothermal heat to provide reliable heating and cooling for our homes and buildings while transitioning off of natural gas.

Geothermal heating and cooling is not a new or radical concept. It is a technology already in place in our Commonwealth, in all 50 states, and around the world.<sup>4</sup> Geothermal micro districts, the renewable energy approach described in H2849/S1940, use the constant heat found several feet below the earth's surface to heat water in a closed loop system. Heating and cooling are transferred to buildings through use of a heat exchanger. Geothermal micro districts can be connected to extend their range beyond a single building. As a local example, MIT and Harvard both use geothermal micro districts to heat large areas of their campuses.

BuroHappold Engineering, a widely respected, international engineering firm, recently completed a GeoMicroDistrict Feasibility Study (June 2019) and delineated how such a system could work in Massachusetts.<sup>5</sup>

A growing number of cities, regions and countries have understood the message of current climate science reports and are committing to 100% renewable futures by 2050 or before. Fossil fuel industries are aware of the threat to their business model from stranded assets as a result of the growing shift of energy policy around the world. H2849/S1940 is a responsible bill with the future in mind. It was developed by clean energy advocates working alongside gas utility representatives. An Act for utility transition to using renewable energy is dubbed the FUTURE Act for good reason; it was developed with a sustainable future in mind, one that uses the amazing resources of our planet right beneath our feet.

We can continue to invest in the failing infrastructure of the unsafe and dirty energy of the past, or we can invest in the future by converting a failing pipeline system to one that distributes clean, safe, renewable, and local heating and cooling for all in the Commonwealth. And we can begin to do this now.

It is time to break from the imbedded, systemic bias of our current energy system that binds us to the past, endangering our health and our ecosphere. H2849/S1940 shows us how we can move forward into a clean energy future that is safe, effective, and economically viable. H2849/S1940 deserves your close attention and most serious consideration as a bill that will protect the health and well-being of your constituents, now and into the future. The League of Women Voters of Massachusetts, representing 47 local Leagues from Cape Cod to the Berkshires, urges you to move the FUTURE Act out of committee and to the floor for a vote this legislative session as a responsible pathway for using available technology to transition our energy system from fossil fuels to safe, renewable, and local energy. There truly is no time to waste.

Thank you for your consideration.

---

<sup>4</sup> The Geothermal City: Introduction – MIT. <https://bit.ly/2PyLi4y>. Accessed 10/9/19.

<sup>5</sup> BuroHappold: <https://heetma.org/wp-content/uploads/2019/10/HEET-BH-GeoMicroDistrict-Final-Report.pdf>. Accessed 11/01/19