

Networked Geothermal: Thermal Utility of Today & Tomorrow

NASEO NATIONAL BUILDINGS SUMMIT 2025

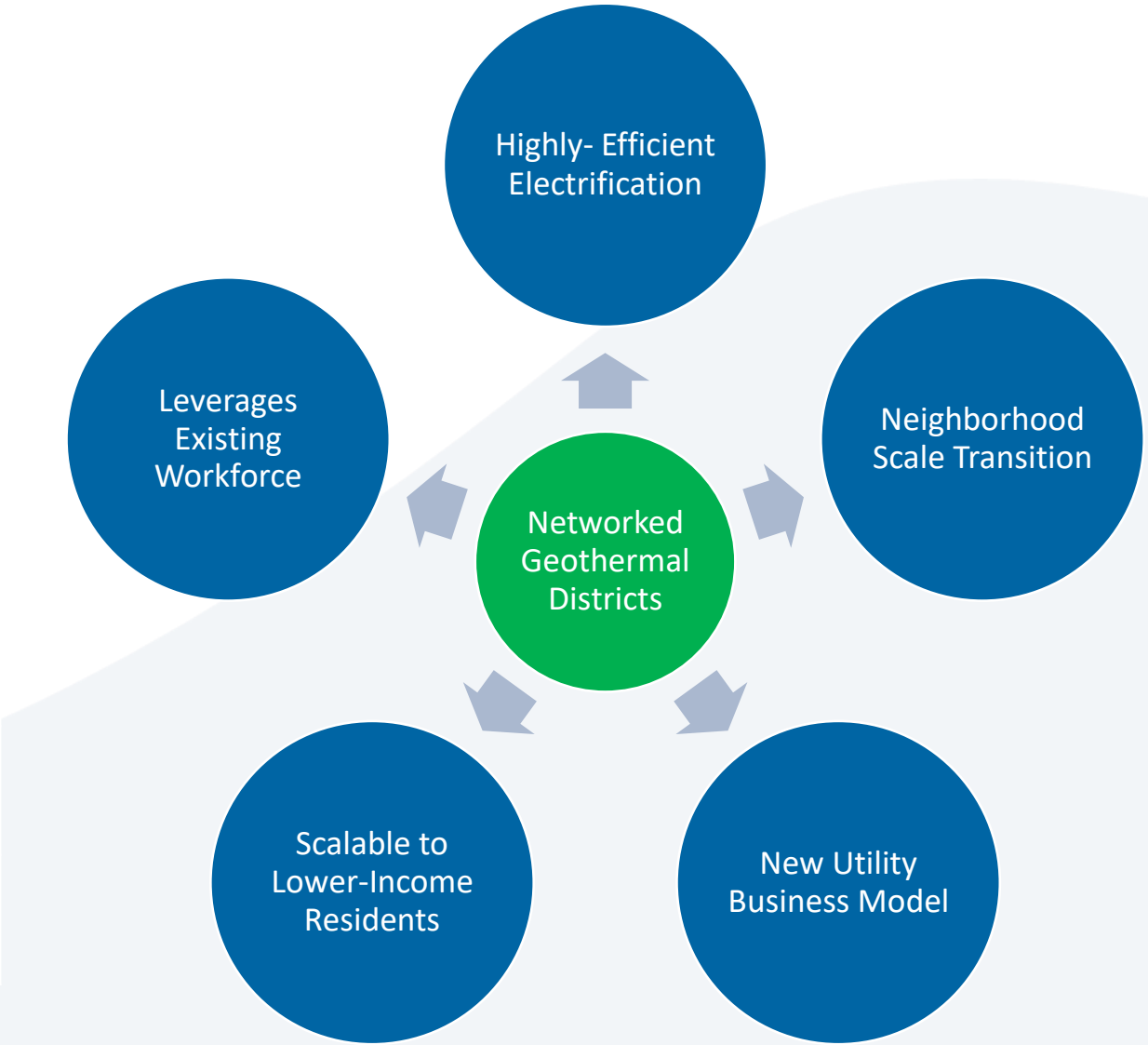
Peter McPhee
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September 8, 2025



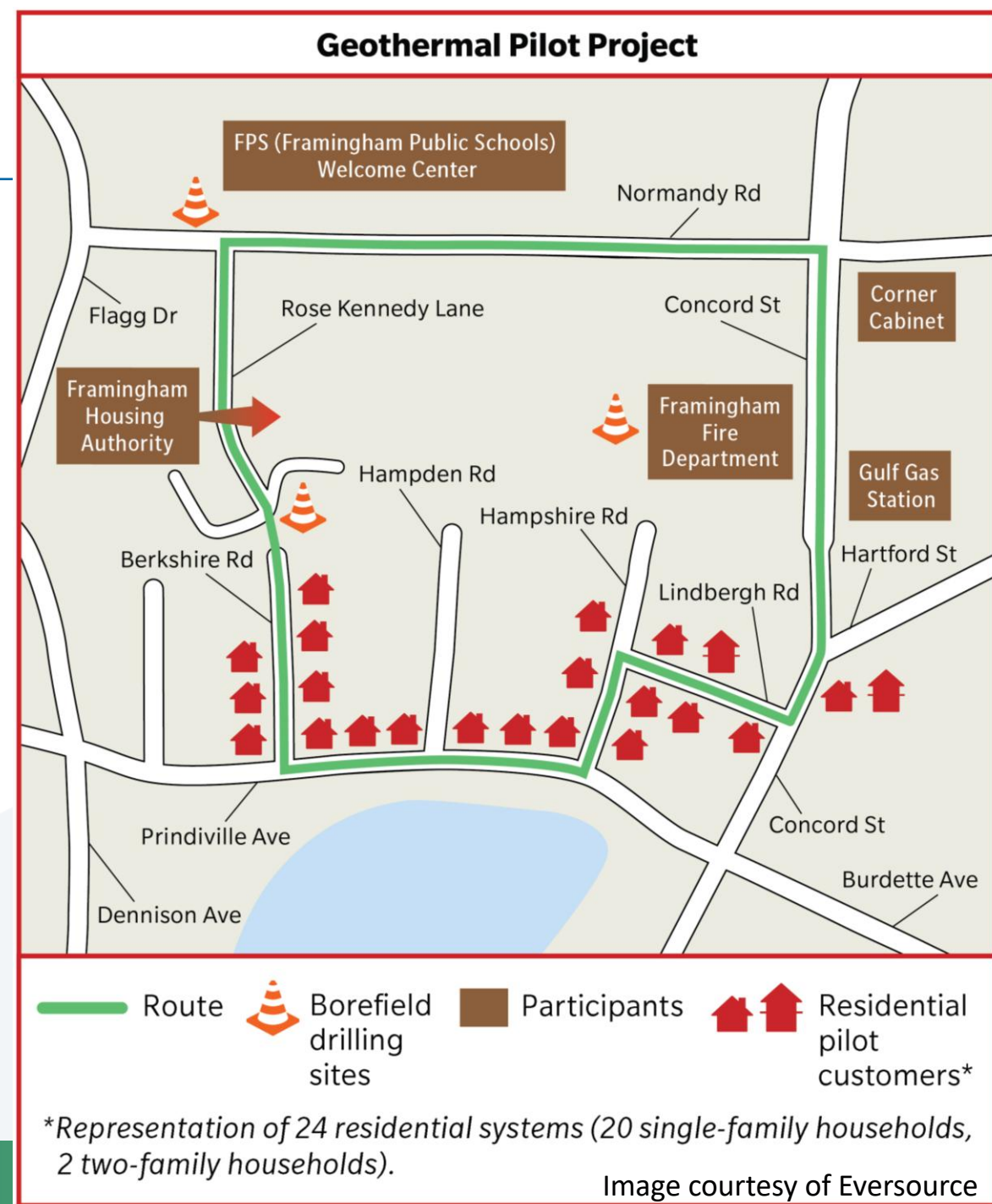
Major Differences & Benefits of Networked Geothermal Districts

Major differences between networked geothermal and individual electrification		
	Networked Geothermal	Individual Electrification
Who drives project?	Utility/ community-led	Individually-led
Who pays for project?	Utilities (& individuals?)	Individuals
Can it happen today?	Regulatory change, planning needed	Yes
Can it replace gas infrastructure?	Yes	No (unless very high adoption)
Where can it be done?	Areas with sufficient density	Anywhere



Eversource Framingham: First Utility-Owned Geothermal District in USA

- **Eversource** is New England's largest energy delivery company with electric and gas service in 3 states
- **Nation's first** utility-owned networked geothermal district (in Framingham, MA)
- **Collaboration with HEET** (non-profit) to originate concept
- Construction began in June 2023
- Operational since August 2024
- **90 boreholes**
- **1 mile** of underground pipe
- **125 customer accounts** with 36 buildings (24 res, 5 comm, 7 other)



Eversource Framingham: Borefield and Pump House



Images courtesy of Eversource

Eversource Framingham: Service Pipe Install



Images courtesy of Eversource

Eversource Framingham: In-Home Upgrades



Images courtesy of Eversource

Eversource Framingham: Collaboration!



Image courtesy of
Eversource

“Learning from the Ground Up”: A Resource for States, Utilities, and Residents

- A \$5M, multi-year collaboration between MassCEC and the HEET project team
- Goals:
 1. Assess performance of Framingham project and establish design and operational best practices, design tools, a publicly-available project database, and performance data
 2. Support communities to conduct feasibility studies for districts across Massachusetts
 3. Conduct state-wide assessment of networked geothermal potential

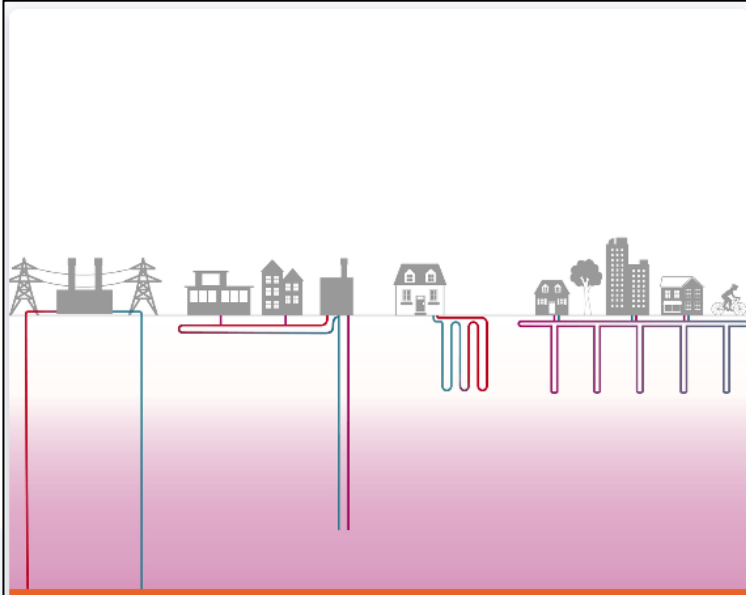


Image courtesy of
MA DPU



Resources from LeGUp and HEET: Everything you need to build a GEN

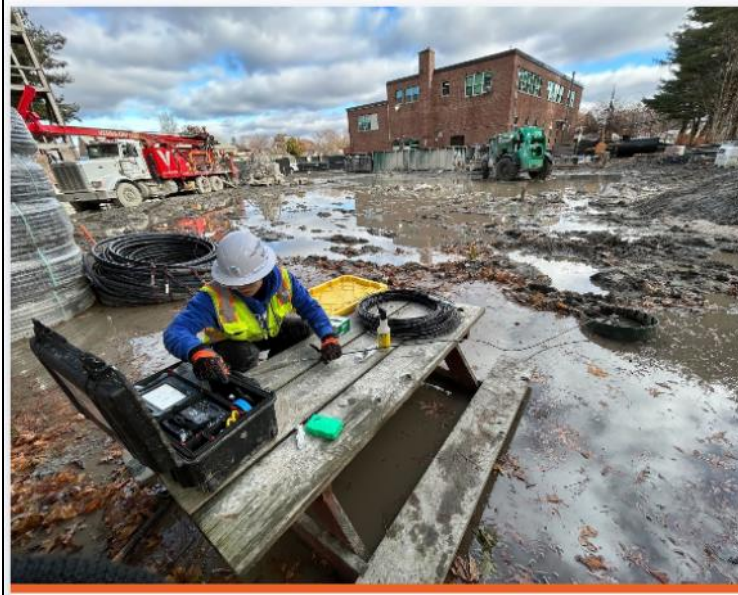
Images courtesy of HEET



Gas To Geo Wiki

This wiki is a platform for individuals to share and access information on networked geothermal systems.

www.gastogeo.wiki



Networked Geothermal Toolkit

This set of resources helps leaders and organizers begin the process of implementing geothermal networks in their community.

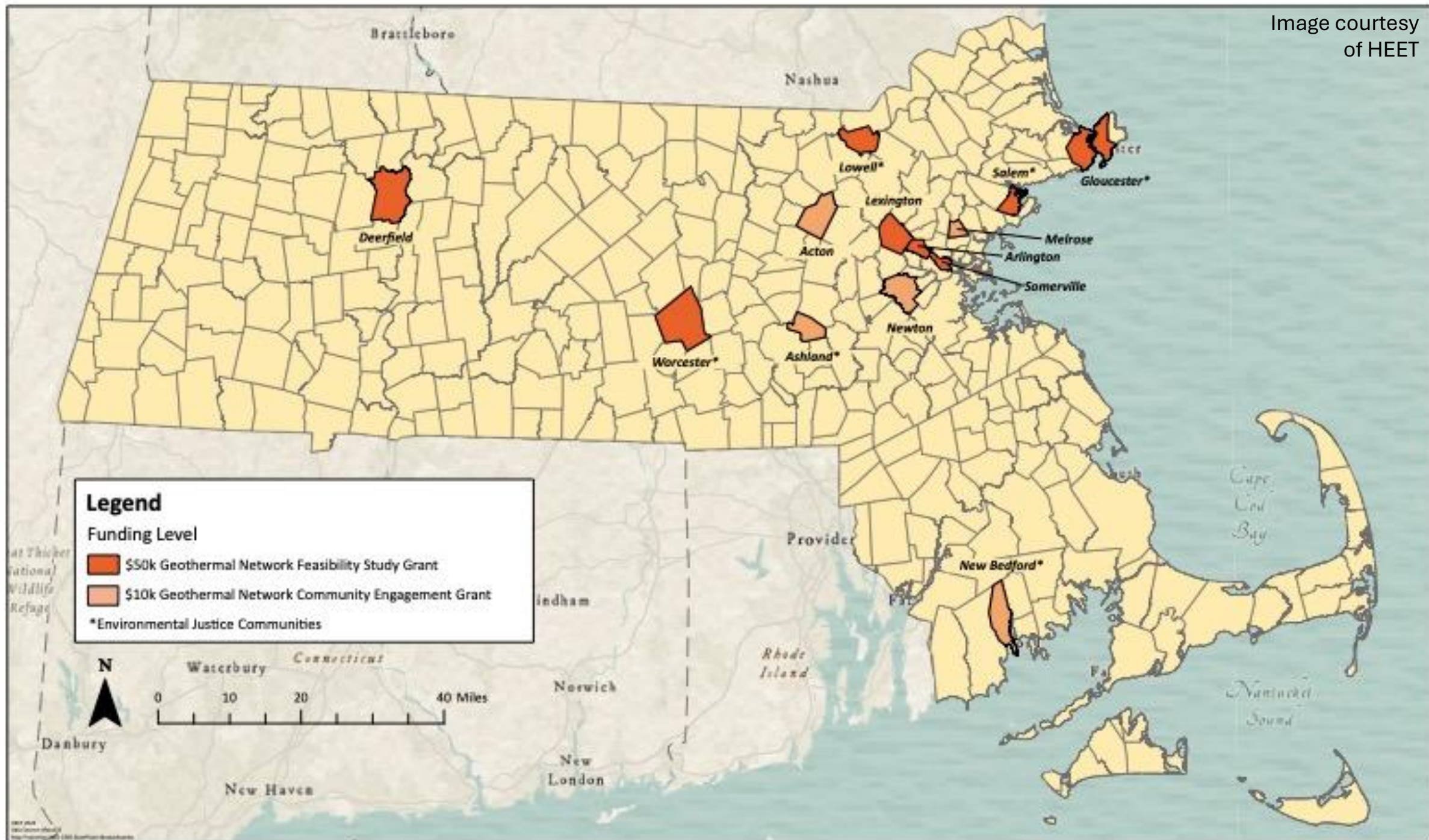
www.heet.org/gas-to-geo-transition



Learning From The Ground Up

LeGUp is a group of researchers studying geothermal networking projects and collecting information to help accelerate the gas-to-geo transition.

www.heet.org/legup



Massachusetts Support for Individual Geothermal Heat Pumps

- Massachusetts has provided consumer support for ground-source heat pumps since 2013
 - MassCEC (innovation agency): 2013-2019
 - Mass Save (utility EE program): 2020-today
- Incentives:
 - \$15,000 for a whole-home ground-source heat pump
- Impact:
 - 171 ground-source heat pumps installed in 2023 (vs. 28,000 ASHPs) - More than doubled from previous year
 - Market potential still unclear
- Benefits: Efficiency, longevity, low cost of operation
- Challenges: Upfront costs, driller availability, construction disruption, tax credit volatility



Thank you!

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Resources:

- ▶ www.masscec.com/program/kickstart-massachusetts
- ▶ www.heet.org