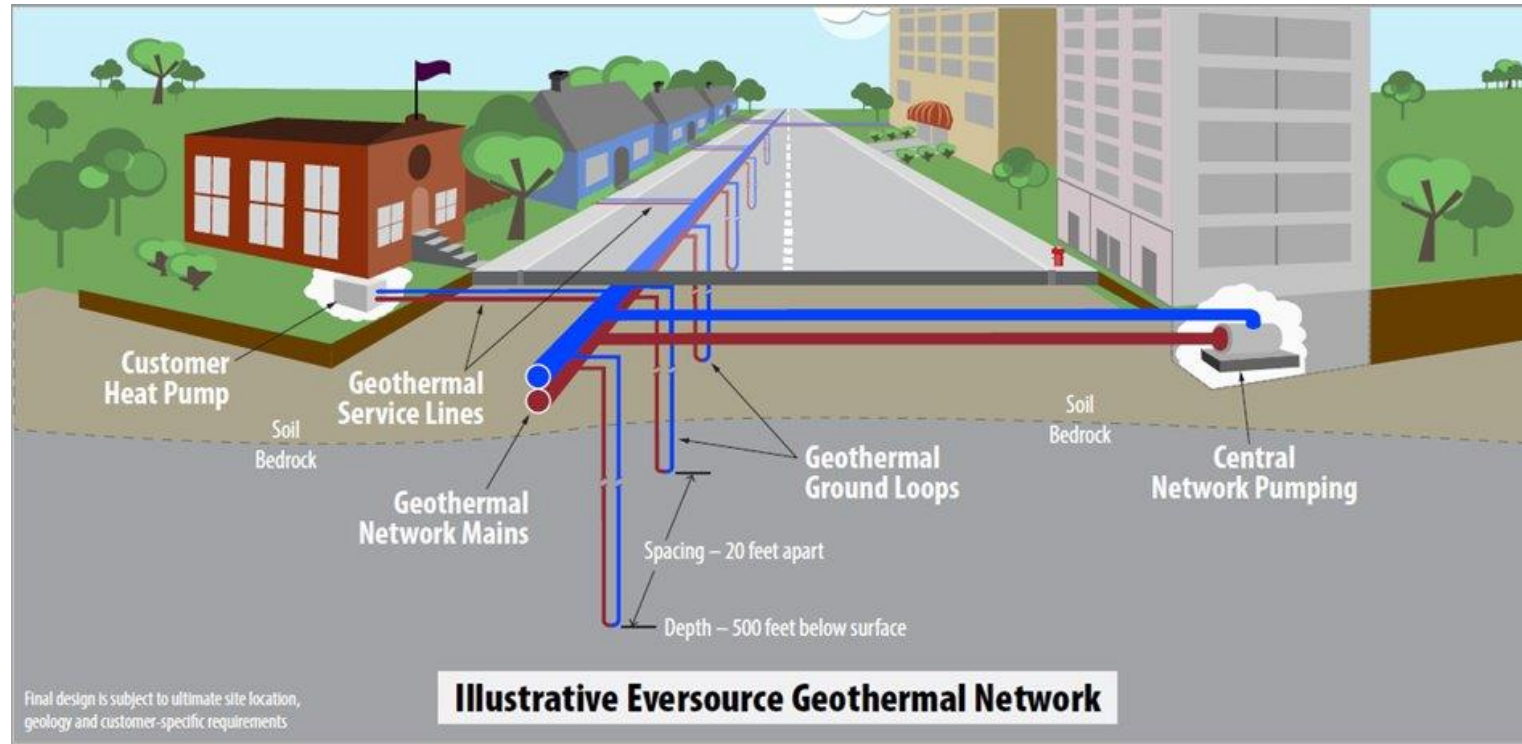




DEPLOYING GEOTHERMAL NETWORKS AT CITY AND
COUNTRY SCALE

Utility Perspective on Scaling

Framingham Geothermal Pilot



Timeline:

- **2019:** Initial pilot proposed in natural gas rate case
- **2020:** Project approved by DPU
- **2021:** Feasibility, site selection: Framingham, MA established as host community
- **2023:** Primary construction begins
- **2024:** System commissioned – customers connected
- **2025:** Formal data collection begins

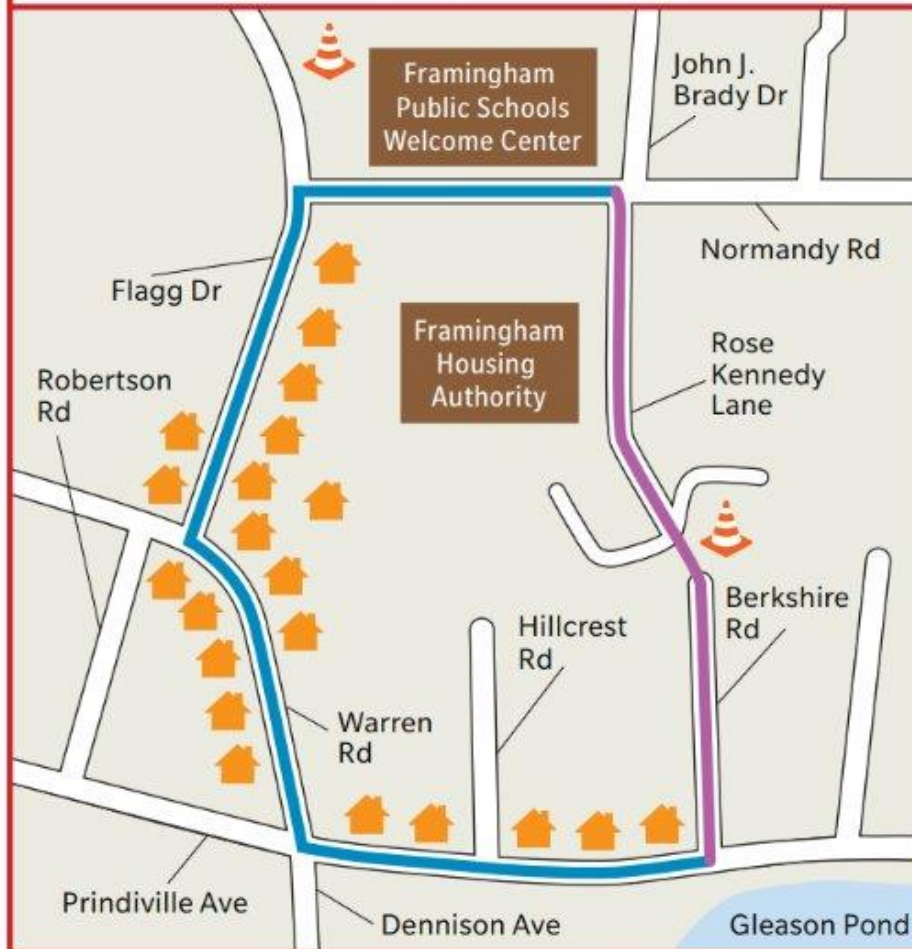
System:

- One pipe design, approx. 1 mile of main
- 37 buildings, approx. 135 individual customers
- 5 commercial customers including large school building
- 90 boreholes to provide capacity of approx. 375 tons of load

Framingham Expansion – A Unique Opportunity

- HEET, the leading funding applicant for the joint team, received \$715K from DOE in 2023 to design an expansion of Eversource's existing pilot
- Second DOE funding opportunity (up to \$10M) was submitted earlier this year by joint applicants:
 - **HEET:**
 - Primary recipient of the DOE grant; collaborating on network design, community engagement and workforce development initiatives
 - **City of Framingham:**
 - Community partner advocating for project
 - **Eversource Clean Technologies Team:**
 - Execution partner responsible for customer, construction, operations, and maintenance of the networked geothermal system
- If awarded, the grant could help fund construction of the loop and demonstrate cost savings of adding to an existing geothermal project

Geothermal Expansion Project*



- Proposed route
- Shared route
- Potential residential customers (representation only)
- Participants
- Borefield drilling sites

**Project is in the very preliminary stages and whether it goes forward will depend on the interest level of and support of the residents along the route.*

- **Capacity:** 400 tons of load
- **Potential Customer Mix:** approximately 180 with mix of 23 residential, 13 Framingham Housing Authority and 1 commercial buildings
- **Estimated In-Service:** 2027
- **Projected Facilities:** 2000 feet of main, up to 50 boreholes, pump vault and instrumentation

Opportunities

- MA emissions reduction goals and regulatory policies encourage electrification
- Several communities expressed interest in future projects
- Pilot data will provide important learnings to apply going forward (e.g., customer acceptance, technology performance, etc.)
- New construction developments provide the potential for cost and construction efficiencies

Challenges

- Identifying locations best suited for technology through integrated energy planning efforts
- Lowering the cost of drilling to make the technology more affordable
- Determining appropriate pricing that balances utility investments with customer usage and affordability
- Building out skilled workforce to support technology expansion at scale

End Slide

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