



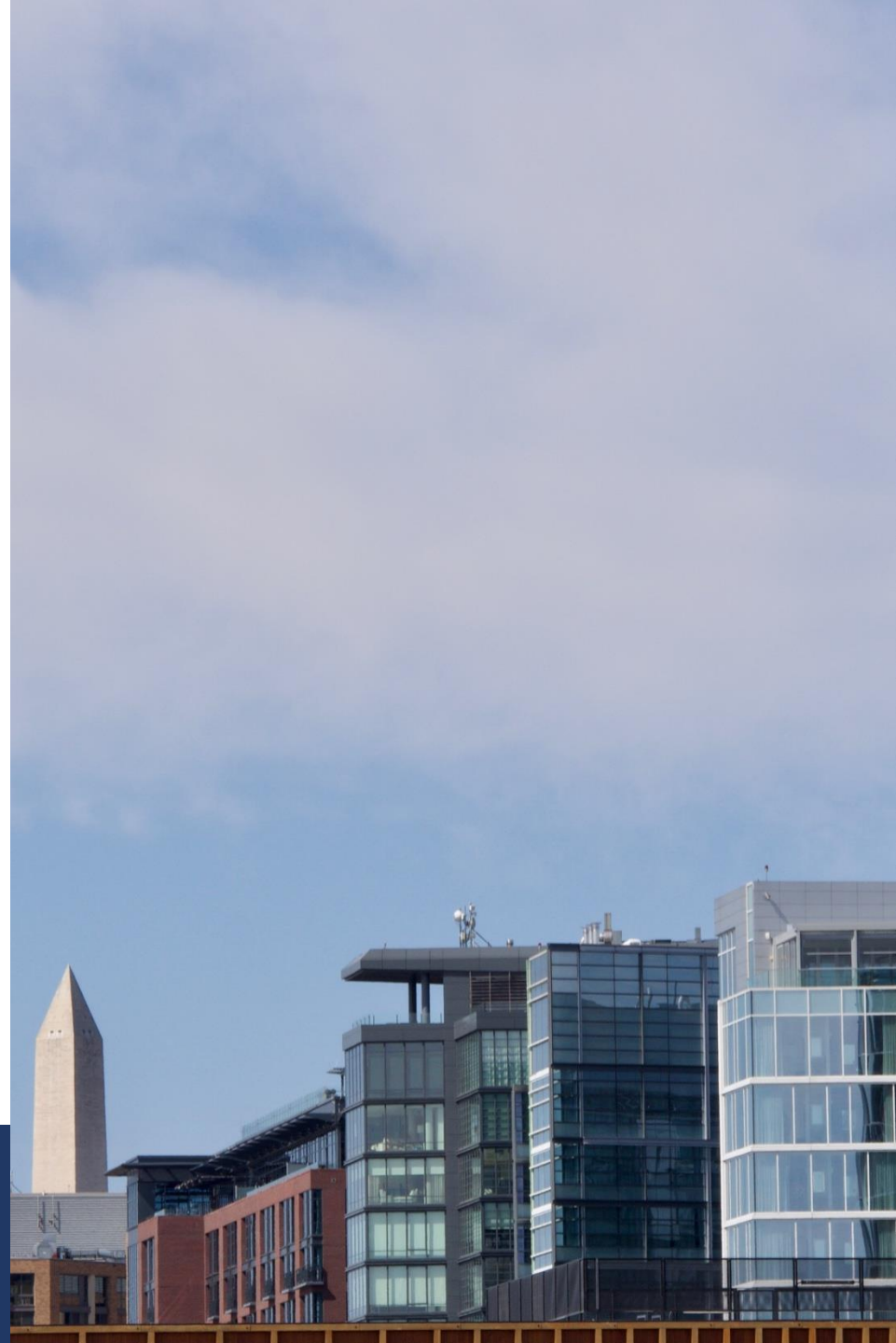
*National Association of
State Energy Officials*

NASEO Buildings Committee

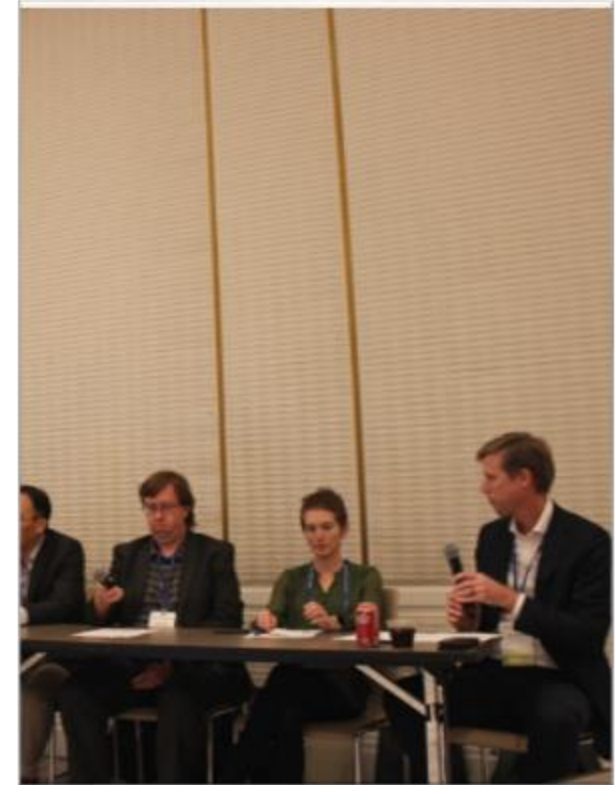
Webinar: Scaling Community-Level Solutions and Other Summit Takeaways

Welcome! We'll begin shortly.

November 14, 2025



2025 NASEO Buildings Summit | NASEO 2025 Annual Meeting



Quarterly NASEO Buildings Committee Meeting: Recurring Agenda

Agenda Section	Description
NASEO Announcements	NASEO staff provide program updates and administrative announcements.
State and Territory Energy Office Updates	The NASEO Buildings Committee leadership team, along with other State and Territory Energy Office representatives will share notable building program developments, legislative actions, and news.
Affiliate Partner Updates	NASEO facilitates a round robin of resources, research, technology innovations, advocacy efforts from Affiliate Partners in attendance.
Federal and National Laboratory Updates	NASEO facilitates updates from U.S. DOE and national labs about funding, technical assistance, and program news.
Resource Roundup	NASEO shares a round-up of resources and links.
Q&A and Open Discussion	~5 minutes of open discussion and Q&A, NASEO housekeeping and adjourn.

NASEO Events and Resources

- ICYMI:
 - November 13, 2025: Energy Codes Taskforce Meeting – Cost Evaluations (State and Territory Energy Offices Only)
 - November 13, 2025: NASEO Energy Efficiency Revolving Loan Funds: Sharing Success Stories and Telling the Stories of Impact (Part 2)
- Upcoming Events:
 - November 19, 2025: NASEO Affordability in Multifamily Buildings Call Series: Behavior Change and Long-Term Engagement ([register here](#))
 - December 16, 2025: NASEO Financing Committee Meeting: Leveraging SEP Funds for State Energy Financing ([register here](#))
- NASEO Buildings Summit (September 8-9, 2025)
 - Presentations are now online and can be found [here](#).
- NASEO Newsroom Highlights (Fall 2025)
 - [Virginia Launches Centralized Hub to Streamline Access to Energy Incentive Information](#)
 - [North Carolina Announces Home Repair Weatherization Readiness Program](#)
 - [Idaho Launches Energy Efficiency Program for Public Buildings](#)
 - [Carrier Meets Milestone in DOE Commercial Building HVAC Technology Challenge](#)
 - [Maryland Opens Applications for Electrifying Community Buildings Program](#)

Partner Resources



Association of Energy Engineers: [Home Energy Professional Certifications](#)



U.S. Climate Alliance: [2025 Annual Report: Governors' Enduring Fight for a Resilient & Sustainable Future](#)



National Renewable Energy Laboratory: Geothermal Heat Pump Case Studies



National Energy Assistance Directors Association: [Winter Price Outlook](#)



Federation of American Scientists: [Resilience Cooling Policy and Strategy Toolkit](#)



U.S. Department of Energy: [Commercial Building HVAC Accelerator](#), [Building Envelope Campaign](#)

- Deferred ENERGY STAR Manufactured New Homes Version 3 Implementation
 - Delayed from January 1, 2026. Homes may still certify to V2. V3 remains available for optional use.
- [DOE Efficient New Homes Program](#)
 - Remains substantively the same as the DOE ZERH program.



bit.ly/3U3W3MK



DOE Geothermal Heat Pump Case Studies & NREL's Thermal Energy Network Projects

Xiaofei Pu, Matt Mitchell

(Highlighting efforts from many others at NREL/DOE)

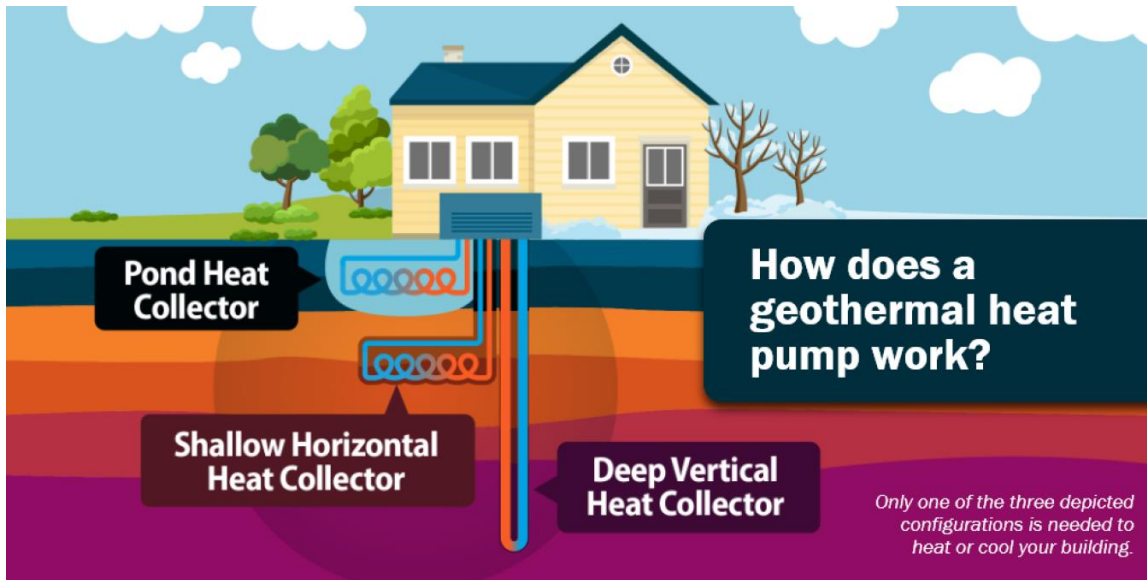
For NASEO Quarterly Meeting

11/14/2025



Geothermal Heat Pump (GHP) Case Studies

- In October 2024, NREL supported DOE’s Geothermal Technologies Office by compiling and publishing 19 case studies from across the United States—in various climate zones, and with different building sizes, loads, use types, and GHP system configurations.
- The goal is to tell real-life stories behind installed GHP systems and highlight the benefits of geothermal heating and cooling in a variety of application scenarios.
- We are working on 5 additional cases in 2025.
- These system installations were **not** funded by DOE/NREL.



Graphic by Joelynn Schroeder, NREL



Graphic by Dominique Barnes, NREL

A Few Networked Systems



Photo from Colorado Mesa University

Colorado Mesa University (Grand Junction, CO)

- One of the largest GHP systems in North America: 16 buildings, 1.2 million ft², 450 boreholes, 4 bore fields, 500 ft deep, 2.5 miles of central loop pipe
- Energy cost saving \$1.5M per year
- Excess heat from the central loops is moved to the swimming pool and irrigation systems, as heat sinks
- Started with one building and one bore field in 2007 to receive state capital construction funding.



Photos from [Epic Systems Corporation](#)

Epic System Corporation Campus (Verona, WI)

- 40 buildings, ~9 million ft², networked system
- 6,100 boreholes, 4 bore fields, 300–500 ft deep
- 2 lake exchange systems, 18,000 gpm open-loop system
- 25% less energy use than comparable building in same climate
- Extensive performance monitoring conducted by UW
- As a healthcare software company, Epic has a 3.5-MW data center on site, with cooling supplied by GHP.

A Few Standalone Systems



Photo from Norton Commons

Norton Commons (Prospect, KY)

- 350 ft deep boreholes for each of the 1,200 single-family homes
- One of the largest residential communities in U.S. with GHP
- 45% energy cost saving
- 6- to 7-year payback period.



Photo from Marine Corps Logistic Base

Marine Corps Logistic Base (Albany, GA)

- 168,000 ft² building, 306 boreholes
- Borehole thermal energy storage (BTES) stores cold winter air in the loop for summer use
- Reduced water consumption by 4.2 million gallon/year
- Adding 3 more BTES system to serve 10 additional buildings.



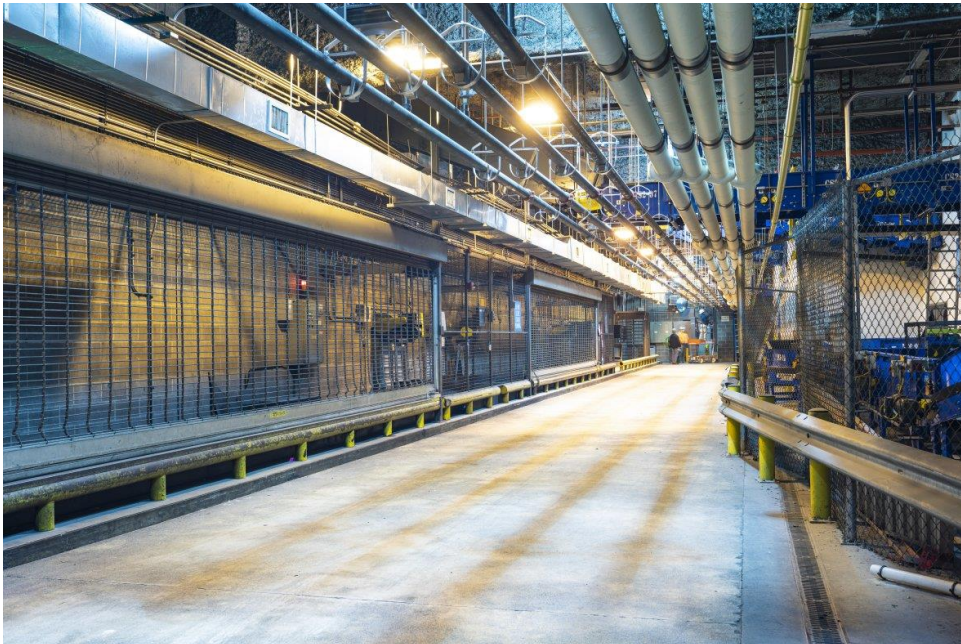
Photo from City of Greensburg

Greensburg City Hall (Greensburg, KS)

- City building rebuilt after violent 2007 tornado
- 1 open-loop borehole, 123 ft deep, serving 4,700 ft² building space
- Open loop to save cost and use less land

FY25 New Case Studies Teaser

- An airport
- A school district in the Appalachians
- A grocery store in the Great Plains
- A college campus in the Southwest
- A residential community for the film and creative industries



Louisville Muhammad Ali International Airport; photo from phcppros.com



Town at Trilith; photo from commercialobserver.com

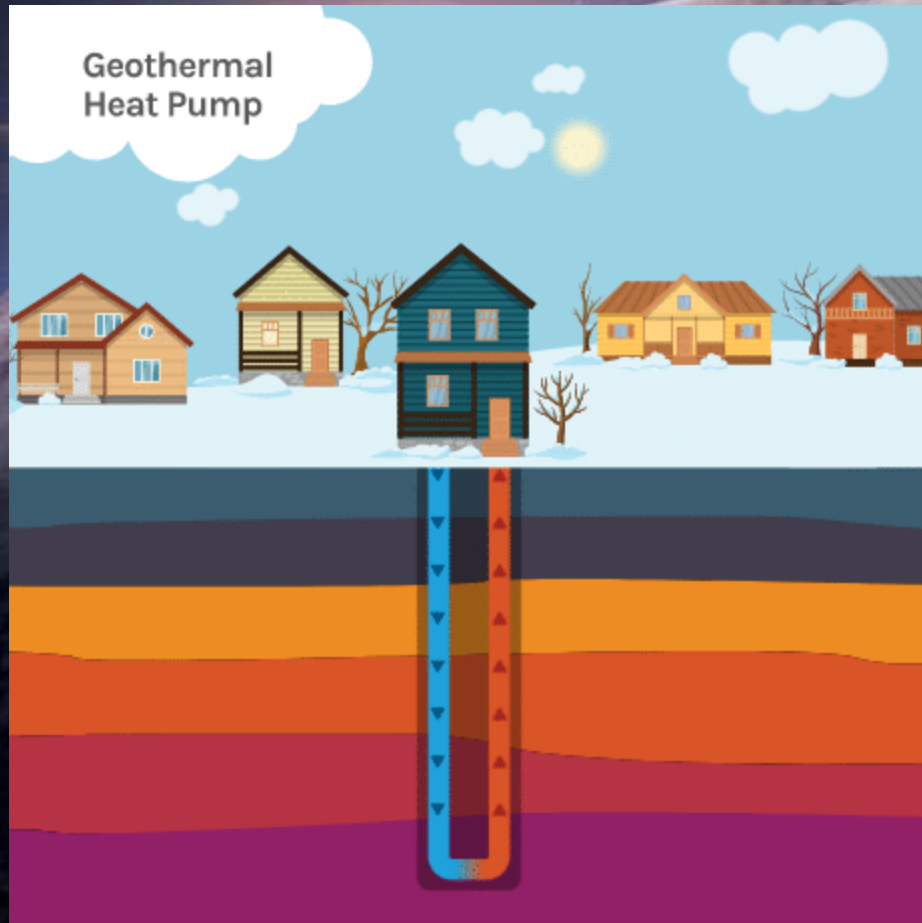
(Some) TEN-Related Projects at NREL

- **Technical Assistance, Feasibility Studies**

- Carbondale, CO
- Hinesburg, VT
- Seward and Pilgrim Hot Springs, AK
- Multiple U.S. federal sites (continental U.S.)
- Two U.S. DoD sites (Germany)
- Bucharest, Romania

- **Model Development**

- Advanced district model development
- Screening tool for site assessment
- Fundamental geothermal and systems models
- UTES for data center cooling



Graphic by NREL

Thank you!

www.nrel.gov/geothermal

NREL/PR-5700-94843

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