



August 19, 2022

COMMUNITY GEOTHERMAL HEATING AND COOLING DESIGN AND DEPLOYMENT

NOTICE OF REQUEST FOR INFORMATION

Description

This Notice of Request for Information (RFI) is being issued by the Connecticut Department of Energy and Environmental Protection (DEEP) to solicit information from Connecticut partners interested in collaborating with DEEP on a response to a Community Geothermal Heating and Cooling Design and Deployment [Funding Opportunity Announcement](#) (FOA) recently issued by the U.S. Department of Energy (DOE).

DEEP will use this information to find partners who may want to collaborate with DEEP or others in submitting a proposal in response to the DOE FOA. DEEP is interested in responses from individuals, researchers, municipalities, tribal governments, utilities, community-based organizations, and others.

Background

On July 12, 2022, U.S. DOE released a FOA for Community Geothermal Heating and Cooling Design and Deployment. Funding awards of \$300,000 to \$13 million are available for design and deployment of community geothermal district heating and cooling systems. Applications are due October 11, 2022, through the Energy Efficiency & Renewable Energy Funding Opportunity Exchange.

The FOA encourages development of innovative community-scale geothermal heating and cooling designs that may include geothermal district heating and cooling, which can be defined as the use of geothermal energy to heat and/or cool multiple buildings through a single distribution network. Widespread adoption of geothermal heating and cooling systems will help decarbonize the building and electricity sectors, reduce energy costs for families, and boost resilience.

The federal funding will support formation of community coalitions that will develop, design, and install community geothermal district heating and cooling systems that supply at least 25% of the overall community heating and/or cooling demand and result in decreased greenhouse gas emissions. DOE seeks diverse teams to form community coalitions including representatives for four key roles:

- **Community Voice** team members who understand and can communicate the energy, environmental, economic, social, and/or other relevant needs that the proposed system would address, as well as local development and regulatory requirements.
- **Workforce** team members who know the community labor market and can help the coalition with apprenticeship opportunities, job placement, and developing training or lesson plans for the applicable trades.
- **Analysis/Design** team members who have experience designing geothermal systems as well as analyzing the economic and technical aspects of such systems.
- **Deployment** team members who have experience building new or retrofitting existing energy systems.

DOE will be providing project funding in 2 phases. The Planning and Design phase will last 12 months and make 1-10 awards for \$300,000-\$750,000. The Deployment phase will last 30 months and make 1-4 awards of \$2.5 million - \$10 million.

Purpose

Several district heating and/or cooling systems exist in Connecticut, including the [Capitol Area System](#) (Hartford), [Hartford Steam](#) (Hartford), a heating loop at a large housing cooperative (Bridgeport), and heating/cooling loops on several college campuses. DEEP's Bureau of Energy and Technology Policy is interested in exploring opportunities for: (a) converting such systems to renewable thermal technologies, including ground-source heat loops and other geothermal energy resources; and (b) developing additional district heating and cooling systems based on such technologies.

The purpose of this DEEP RFI is to identify municipalities, utilities, community-based organizations, and other stakeholders interested in collaborating with DEEP to develop a joint proposal for Connecticut geothermal heating and cooling districts for submission to DOE by October 11, 2022. Respondents to this RFI *do not* need to submit a robust project package at this point; but the agency requests that they reply as fully as possible to the questions below. Funding by DOE is not guaranteed, and DEEP may ultimately elect to not submit a proposal to DOE.

Additional Resources

- [Full DOE Funding Opportunity Announcement document](#) (DOE)
- [Geothermal Basics](#) (DOE Geothermal Technologies Office)
- [Consumer Guide to Geothermal Heat Pumps](#) (DOE Office of Energy Efficiency & Renewable Energy)
- [District Energy Systems fact sheet](#) (DOE Office of Energy Efficiency & Renewable Energy)

Timeline

Funding Opportunity Announcement issued	July 12, 2022
DOE informational webinar	August 22, 2022, at 2:00 p.m. ET (register here)
DEEP RFI response deadline	September 6, 2022, at 5:00 p.m. ET
DOE submission deadline	October 11, 2022, at 5:00 p.m. ET
Expected submission deadline for replies to DOE reviewer comments	December 7, 2022, at 5:00 p.m. ET
Expected date for DOE EERE selection notifications	March 2023
Expected timeframe for DOE award negotiations	Spring 2023

Questions

DEEP recognizes that at this stage most stakeholders are unlikely to be able to provide detailed outlines of specific potential district projects, partnerships, and collaborations or to commit to playing a specific role in a collaboration in response to the DOE FOA. DEEP invites respondents to provide preliminary answers to the questions below, providing as much detail as possible.

1. What municipality, company, or organization do you represent? What is your role there?
2. Are you aware of *existing* district heating/cooling system(s) within your community or elsewhere in Connecticut, other than those identified above? If so, please describe it

(location, age, number and type of buildings, ownership, type of heating system, heating fuel, key contacts, etc.).

3. Has your municipality, company, or organization engaged in discussions or planning regarding a *potential* district heating/cooling project in Connecticut?
 - a. If so, please describe the status of these discussions and any associated planning as well as the nature of the potential system (location, number and type of buildings, ownership, type of heating system fuel, key contacts, budget, etc.).
 - b. If not, do you have a particular *potential* heating/cooling district project in mind today as you respond to this DEEP RFI? If so, please describe it (location, number and type of buildings, ownership, type of heating system, heating fuel, key players, etc.).
4. Overall, what is your interest in geothermal district heating/cooling and in a potential collaboration with DEEP or others in developing a proposal in response to the DOE FOA? In broad terms, what role do you envision you or your municipality, company, or organization might be able to play in developing a proposal? More specifically, which of the roles articulated by DOE – Community Voice, Workforce, Analysis/Design, or Deployment (see descriptions above) – would you anticipate performing?
5. Does your proposed heating/cooling district project address environmental justice and equity concerns (fossil dependence, high energy burden, environmental or climate hazards, or other socio-economic vulnerabilities)? If so, how? What else does DEEP need to know about district heating/cooling systems and about the potential for use of renewable thermal energy for them?

How to respond to the RFI

Parties potentially interested in collaborating in development of a formal proposal to DOE should submit responses by emailing DEEP at DEEP.EnergyBureau@ct.gov by September 6, 2022, at 5:00 p.m. In the subject line of the e-mail, please indicate “Community Geothermal RFI.”

Questions regarding the DEEP process should be sent to the same e-mail address and use the same subject line.

Although DEEP does not intend to publish responses on the DEEP Energy Web Filing System, respondents should be aware that all information submitted to DEEP is subject to disclosure

under the Connecticut Freedom of Information Act (FOIA) unless a statutory exemption applies. If a respondent submits confidential information to DEEP, the respondent acknowledges that FOIA governs public access to that information. The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact us at (860) 418-5910 or DEEP.Accommodations@ct.gov if you are seeking a communication aid or service, have limited proficiency in English and may need information in another language, require some other accommodation or wish to file an ADA or Title VI discrimination complaint. Any person needing a hearing accommodation may call the State of Connecticut relay number – 711. Requests for accommodations must be made at least two weeks prior to any agency hearing, program, or event.