

Orange and Rockland Utilities, Inc.

REQUEST FOR INFORMATION (RFI)

UTILITY THERMAL ENERGY NETWORKS PILOT PROJECTS

ISSUED: DECEMBER 21, 2022

SUBMISSION DEADLINE: JANUARY 31, 2023



Orange & Rockland



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1 Introduction

By this Request for Information (“RFI”), Orange and Rockland Utilities, Inc. (“O&R” or the “Company”) is requesting information from real estate developers, building owners, municipalities, and/or other parties (“Respondents”) who are interested in partnering with O&R for the development of two utility thermal energy network (“UTEN”) pilot projects. These UTEN pilots are intended to showcase the benefits of installing and operating a thermal energy network, as well as to investigate the suitable business models and regulatory framework for them. Thermal energy networks can provide a cleaner, more efficient source of electrified heating and may play an integral role in New York State’s clean energy future.

The Company seeks to develop these pilot projects to provide benefits to participating customers while achieving key learning objectives, testing the scalability of thermal energy networks, and informing future regulatory policy.

As part of the pilot(s), O&R will design, install, and maintain UTENS (*e.g.*, shared geothermal loops) that provide customers thermal energy. Customers will own and operate the equipment (*e.g.*, ground-source heat pumps (“GSHPs”)) required to use the thermal energy for heating and cooling purposes. O&R needs a project partner able to provide a viable site and/or anchor customers for these pilot(s) and be a collaborator throughout project implementation.

2 Background

O&R is a subsidiary of Consolidated Edison, Inc., one of the nation's largest investor-owned energy companies, and an affiliate of Consolidated Edison Company of New York, Inc. (“Con Edison”). In New York State, O&R provides electric and gas service to Orange County, Rockland County, and parts of Sullivan County, New York, and is regulated by the New York Public Service Commission (“PSC”).

In July 2022, New York State passed a new Utility Thermal Energy Networks and Job Act,¹ which resulted in the PSC’s Thermal Energy Network Order.² These pilots will be conducted in accordance with the Thermal Energy Network order and other applicable PSC directives and orders.

O&R is seeking partners to locate up to two pilot sites whereby the Company would design, install, own, operate and maintain UTENS that will provide thermal energy to customers. This RFI is requesting information for potential pilot sites across two different site types: (1) new residential or mixed-use community development; and (2) retrofit installations in existing community.

The pilots are intended to investigate the following:

- i. To what extent thermal energy networks can provide financial and operational benefits to drive customers' adoption of GSHPs;
- ii. To what extent GSHP adoption will increase customer adoption of additional clean energy technologies (*e.g.*, solar or energy efficiency measures);
- iii. To what extent the Company's engagement can streamline shared geothermal system installation;

¹ Laws of 2022, Chapter 375 (enacted July 5, 2022).

² Case [22-M-0429](#), *Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act* (“Thermal Energy Network Proceeding”), Order on Developing Thermal Energy Networks Pursuant to the Utility Thermal Energy Network and Jobs Act (issued September 15, 2022) (“Thermal Energy Network Order”).



- iv. To what extent customers will transition to full electrification after their experience with using thermal energy for their heating and cooling needs;
- v. To what extent new residential or mixed-use community developments will be designed and implemented as fully electrified developments if participating in the pilot program; and
- vi. To what extent the Company can pair a UTEN with utility-owned solar and storage to develop a resilient, localized energy district.

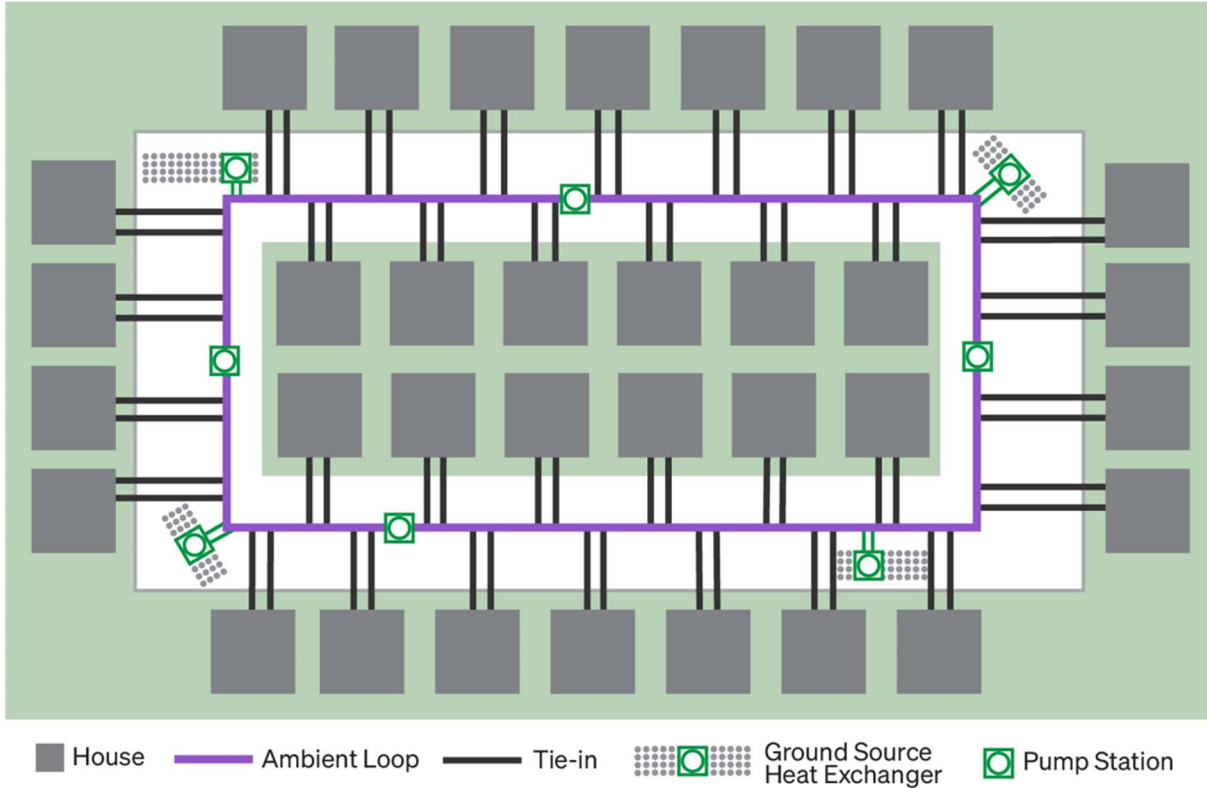
Each of the selected sites must be located geographically within O&R's gas and electric service territory. O&R has filed with the PSC a compliance filing for two pilots, one of which must be located in a disadvantaged community.³

Once O&R has selected the sites, O&R will work together with its selected sites and partners to finalize the UTEN designs and file the proposed pilot projects with the PSC for funding approval. Only projects approved by the PSC will be able to proceed.

2.1 Utility Thermal Energy Network Design Overview

The purpose of this RFI is to locate sites for the installation of UTENs. The UTEN will provide thermal energy for heating and cooling to the buildings located around the site(s), which can include multiple building types (*e.g.*, residential, commercial). The thermal energy supply will most likely be designed as a one-pipe closed loop system utilizing ground source geothermal bore holes as the heat exchange mechanism to supply thermal energy (for heating) and sink thermal energy (for cooling). The design will also include a single pipe supply loop with in-line pumps that circulate a heat transfer solution (antifreeze and water mix). The heat transfer solution in the loop will be designed to maintain a relatively constant temperature (*e.g.*, 55 degrees). Participating buildings will be connected to the loop with a pair of parallel service pipes that draw (and discharge) the heat transfer solution from the loop into the building for heating and cooling. See the figure below for a simple schematic of a theoretical thermal energy network.

³ Filing 10, Utility Thermal Energy Network Pilot Proposal. [See NYSDPS-DMM: Matter Filing Item.](#)



2.2 Overall Pilot Schedule

O&R currently anticipates the following schedule for the implementation of these pilots. Projects that can meet an 18-month installation timeline are highly desirable. O&R understands that some projects may not be able to meet the anticipated project schedule but still encourages the submittal of those projects because it may be possible to break the projects into phases. O&R is willing to work with the Respondents on the timing of their projects.

Key Milestones	*Timeframe (from site selection)
Site Selection and Customer Acquisition	January-February, 2023
Feasibility Analysis and Preliminary Design	~March, 2023
Submission of Proposed Project	~March-April, 2023
PSC Approval of Proposed Projects	Q2 2023
Detailed Project Design	Q3 2023
Execution of Agreement with Selected Respondent and Connected Customers	Q3 2023



Construction Initiated	Q4 2023
Construction Completion	Q1 2024
Start-up & Commissioning	Q2 2024

*Deviations from this estimated implementation timeline are not grounds for disqualification

3 Site Information

The Company is seeking information on potential sites to install UTENs as part of the Utility Thermal Energy Network and Jobs Act. This section outlines the description (or “site types”), requirements, and preferred characteristics of the potential sites.

3.1 Site Types

There are two site types to be considered as part of this pilot:

#1 – New Community Development: One type of site being considered is a new community development (*e.g.*, new subdivision) or a portion of new community development. The intent would be for O&R to install a UTEN that would be the sole source of heating and cooling for the buildings located in the new development.

#2 – Retrofit Community: The second site type being considered for a pilot installation is an existing community where the UTEN would be installed by O&R and connected to existing buildings. A subset of the buildings located in retrofit site can be parcels with new and/or demolition (*i.e.*, rebuilds) facilities.

3.2 Site Requirements

Respondents must have control or be able to obtain control of facilities within the proposed site. If available, Respondents shall include letters of support from government agencies (*e.g.*, municipalities), and/or property owners, indicating control of the property and rights-of-way to allow for O&R’s installation of the UTEN infrastructure. For proposed retrofit sites, Respondents shall include letters of support from owners of associated buildings, or a proposed timeline for solidifying commitment letters with the intent to use the thermal energy network.

Signed letters of support or other indicators of intent shall be included in the RFI submission. The Company is interested in these letters of support from partners, developers, vendors, government agencies, and/or any party because they can influence the success of execution of these pilots.

In addition, the pilots **must meet** the following site criteria:

- The proposed sites shall be located within the Company’s New York electric and gas service territory
 - Respondents can see a map of O&R’s electric and gas service territories here: [Our Services & About Us | Orange & Rockland \(oru.com\)](#)
- One of the two sites must be located in a disadvantaged community



- Respondents should refer to the most current working definition of disadvantaged communities proposed by the Climate Justice Working Group formed in accordance with the Climate Leadership and Community Protection Act
- Respondents can use the NYSERDA website for disadvantaged communities to learn more: <https://www.nysesda.ny.gov/ny/disadvantaged-communities>.

3.3 Preferred Site Characteristics

The preferred sites for these pilots will contain mixed-use (*i.e.*, commercial, and residential) buildings because it will allow for fewer geothermal boreholes and provide other project benefits (*e.g.*, more efficient operations) due to the diversification of heating and cooling loads.

The Company also maintains the following list of ***preferred characteristics*** for the proposed sites and new building projects:

- Site Characteristics
 - Development density of approximately 5-7 units per acre;
 - Appropriate geology for ground-loop installation with one or more available green spaces, recreation areas, or parking areas where the geothermal bore holes could be located; and
 - Total potential cooling/ heating load between 150 tons and 500 tons with a minimum of 100 tons or two buildings committed upon installation of the thermal network.
- New Building(s) Project Characteristics
 - Status of the project must be in the planning stages (*i.e.*, prior to construction and permitting) or in a phased construction stage (with future stages being proposed); and
 - Estimated construction start date for the thermal network utility infrastructure is 12-18 months from release of this RFI.

These are only preferred characteristics and are not required for consideration. O&R will evaluate each proposal holistically, based on the proposal evaluation criteria listed in Section 5.3 below.

3.4 O&R vs. Customer-Owned Equipment

For these pilots, O&R will design, install, operate, and maintain a shared thermal energy network that will include all the equipment and infrastructure required to provide the thermal energy for heating and to sink the thermal energy for cooling. A list of the utility infrastructure owned and operated by O&R includes the following:

- Loop piping connecting buildings (typically located in right-of-way);
- Pumping equipment and piping;
- Geothermal boreholes;
- Utility side service connections (up to the point of customer owned infrastructure); and
- Measurement sensors and telematics to gather system performance data.

Customers connecting to the shared thermal energy network shall be responsible for the installation and maintenance of the following:



- Heat pumps in buildings;
- Any necessary upgrades to existing building and HVAC systems, including updated duct work and electric work; and
- Contingency HVAC equipment (*i.e.*, if thermal energy network is down).

3.5 Incentives for the Installation and Conversions of Customer-Owned Equipment

Although the customers are required to own and maintain their internal heating and cooling equipment, O&R is willing to consider providing financial support, along with other clean energy incentive programs and government grants, to developers/customers for costs of installing new GSHPs and associated conversion investments for these pilots. This potential financial support is subject to PSC approval and will be included, as applicable, in the negotiated agreement between O&R and the Respondent.

Examples of existing incentive programs that might be combined with incentives from these pilots are NYSERDA PON 4614, Clean Heat, Non-Pipes Alternatives, C&I Incentives, and Section 48D of the IRS Tax Code (*i.e.*, Inflation Reduction Act of 2022).

4 RFI

This portion of this RFI will outline the RFI Solicitation Milestones (*i.e.*, the RFI schedule), Response Format and Content, and Response and Submittal Instructions.

O&R seeks to use this RFI process to increase transparency and broaden its search for actionable project sites. To that end, potential Respondents are encouraged to provide feedback on this RFI process to:

GeothermalNeighborhood@oru.com.

RFI Solicitation Milestones	Completion Date*
RFI Issued	December 21, 2022
O&R Webinar on Pilot RFI	January 4, 2023
Deadline to submit clarification questions	January 6, 2022
Responses to clarification questions will be sent out	January 11, 2022
Respondents' proposals due	January 31, 2023
Post Submission Interviews**	Up to February 14, 2023

*O&R reserves the right to change any of the above dates.

**Interviews will be conducted on a rolling basis as proposals are submitted.



4.1 Response Format and Content

Respondents' proposals and supporting attachments are to be emailed to O&R at GeothermalNeighborhood@ORU.COM. Respondents may propose multiple sites and may propose participating in one or both pilots through a single submission. Respondent submissions shall be provided as PDF documents with the Questionnaire in .xlsx format. The responses for the pilot site proposals shall include the following:

- Cover letter;
- Map(s) delineating the proposed site;
- Site Description (if available);
- Construction drawings (if available); and
- Letters of support.

4.1.1 Cover Letter

The Respondent's cover letter shall include the following:

- The legal name and address of the Respondent;
- The name, title and telephone number of the individual authorized on behalf of the Respondent to submit information and negotiate the final Agreement;
- The signature of a person authorized to represent the Respondent;
- General description of the proposed project site;
- List of existing partnerships with Engineering, Procurement, and Construction firms and any additional relevant subcontractor agreements;
- Listing of all permits, approval and authorizations needed to implement the project; and
- Statement that the Respondent has read, understands, and agrees to all provisions of this RFP or, alternatively, indicating that exceptions will be taken into this RFP (and identifying such exceptions).

4.1.2 Map(s) Delineating Proposed Site

Respondents shall include a map showing the proposed site location. The map shall delineate the areas proposed for the thermal network pilot. For retrofit installations, the map shall indicate which buildings are expected to connect to the thermal network upon the initial installation of the UTEN.

4.1.3 Site Description for Retrofitting Existing Community

Each RFI response should provide a description of the Respondent's proposed site. At a minimum, maps or sketches showing the delineated site shall be included with the submission (as described above). If available, the following information shall also be provided for retrofit sites:

- Existing building information:
 - Types (e.g., residential, commercial, multifamily);
 - Area measurements;
 - Age;
 - Existing HVAC; and
 - Block and Lot information.
- New buildings or any major renovations:
 - Address;
 - Site Plans;
 - Projected heating/cooling loads; and



- Proposed/existing HVAC.
- Available locations (*e.g.*, parking lots) for geothermal wells.

4.1.4 Plot Plans for New Community Development

Respondents shall include plot plans for any proposed sites for new developments. The plot plan shall include the arrangement of buildings, parking lots, drives, landscaping, and any other structure that is part of a development project.

4.1.5 Construction Drawings

If available, Respondents shall provide construction drawings for any new or renovated buildings located in the proposed site area.

4.1.6 Letters of Partnerships and Support

Respondents shall include letters of support from partners, developers, vendors, government agencies, and/ or any party that will influence the success and desired outcomes of Respondent’s site selection ranking.

4.1.7 Requested exceptions to this RFI

Any exceptions to the terms, conditions, provisions, and requirements herein shall be specifically noted and explained in Respondent’s response to this RFI. O&R will assume that any response to this RFI expressly accepts all this RFI terms, conditions, provisions, and requirements, except as expressly and specifically stated in Respondent’s response to this RFI.

4.2 Response and Submittal Instructions

Responses must be submitted to O&R by email to: GeothermalNeighborhood@ORU.Com. Please format the email subject line as follows: “UTILITY THERMAL ENERGY NETWORKS PILOT PROJECTS”: “Company Name”, “[Purpose]” (*i.e.*, Purpose may be “Clarifying Question” or “RFI Proposal”)

All RFI responses are due to the above-mentioned email address by 12:00 AM EST on February 1, 2023. The Company shall have no obligation to evaluate late submissions, nor be responsible in any way for any consequences associated with late submissions.

Responses delivered by hand or fax, regular mail, or any other method will not be accepted. O&R will not be responsible for late, lost, illegible or misdirected submissions.

O&R may, at its option, contact Respondents with additional questions or information requests. If the Company is interested in a Respondent’s proposed site, O&R may contact the Respondent and provide additional details regarding the process after this submission.

4.3 Clarification Questions

Any questions or clarifications concerning this RFI should be directed to O&R at GeothermalNeighborhood@ORU.Com. The deadline to submit questions via email is 12:00 AM EST on January 6, 2023. Emailed questions received after this date will not receive a response. O&R will not respond to any questions received in-person, by mail, by fax, or by phone.

A summary of all questions submitted, and the corresponding answers, will be posted on O&R’s website by January 11, 2023.



5 Evaluation Approach

All submissions made in response to this RFI will be evaluated by a committee (the “Evaluation Committee”) comprised of a cross functional team of O&R subject matter experts. The Company may seek third-party subject-matter experts and advisors to assist with the review and evaluation of the submissions received in response to this RFI. The goal of the Evaluation Committee will be to identify sites that meet the criteria as conveyed in this RFI. The evaluation process is intended to be fair and equitable, with the objective of achieving the greatest overall value to O&R customers while informing future rules and regulations associated with UTENS.

Respondents should note that although O&R will be reviewing each Respondent’s proposal, assuming the submission criteria are met, there is no guarantee that O&R will select it or any other proposal.

5.1 Qualifications of Respondents

The Company may make such investigation as the Company deems necessary to determine the qualifications of the Respondent and any project partners. A Respondent shall promptly furnish any information and data for this purpose as may be requested by the Company. The failure of a Respondent to produce timely information and data requested by the Company may provide a basis for rejection of the proposal.

5.2 Post Submission Interviews

After evaluating the submissions, O&R may schedule post submission interviews with the top-ranking respondents. The interviews will provide O&R an opportunity to further evaluate the proposed sites and the qualifications of the Respondents.

5.3 Proposal Evaluation Criteria

Proposals will be evaluated by the Evaluation Committee and scored based on a range of criteria. The objective of the evaluation will be to select two projects that best meet the criteria set forth in this RFI. The following list specifies the main criteria that O&R will consider during the evaluation:

- Project location (*e.g.*, in a Disadvantaged Community, in an area with surplus electric supply, in an area with limited gas supply);
- Size of the project (# Units/Total Sq-ft);
- Total heating/cooling load;
- Density of the site (*i.e.*, units per acre);
- Surrounding building makeup;
- Number of buildings willingly to committed to the thermal network;
- Available area for geothermal wells (*e.g.*, green space and parking area);
- Construction timeline; and
- Overall project viability.

6 Terms and Conditions

Each Respondent is solely responsible for including all pertinent and required information in its submission. O&R reserves the right to determine, at its sole discretion, whether a submission is incomplete or non-responsive.

Respondents shall state clearly all assumptions made with respect to this RFI. In the absence of an explicit statement to the contrary, each Respondent shall be deemed to have agreed with and understood the



requirements of this RFI. While O&R has endeavored to provide accurate information, O&R makes no warranty or representation of accuracy regarding this RFI.

Respondents agree to keep confidential all information provided by O&R in connection with this RFP.

6.1 General Guidelines

By responding to this RFI, Respondents are deemed to accept and agree to these general guidelines. By submitting a response to this RFI, Respondent acknowledges and accepts O&R's rights as set forth in this RFI, including those identified in these general guidelines.

O&R reserves the right: (a) to reject any Respondent submission, (b) to request clarifications or additional information from a Respondent regarding its submission, (c) to revise and re-issue this RFI or to revise any requirements of this RFI, (d) to extend any deadlines applicable to this RFI, (e) to hold discussions with any Respondent to clarify/correct any deficient responses which do not conform fully with the instructions set forth in this RFI, and/or (f) to file and implement pilot projects without initiating an RFI process and on topics other than the topic that is the subject of this RFI. O&R may exercise the foregoing rights at any time, without notice and without any liability to a Respondent or any other party for expenses such Respondent or other party incurred in the preparation of responses to this RFI. All costs and expenses associated with the submission of any initial or supplemental response to this RFI shall be borne solely by the applicable Respondent.

O&R reserves the right to make changes to this RFI by issuance of one or more addenda or amendments and to distribute additional clarifying or supporting information relating thereto. O&R may ask any or all Respondents to elaborate or clarify specific points or portions of their submission. Clarification may take the form of written responses to questions or phone calls or in-person meetings for the purpose of discussing this RFI, the responses thereto, or both.

It is the sole responsibility of each Respondent to include all pertinent and required information in its submission. O&R reserves the right to determine in its sole discretion whether a submission is incomplete or non-responsive.

This RFI shall not be construed to establish an obligation on the part of O&R to enter any agreement, or to serve as a basis for any claim whatsoever for reimbursement of costs for efforts expended by Respondents.

The issuance of this RFI and the submission of a response by any person or entity does not obligate O&R to qualify the Respondent in any manner whatsoever. A legal obligation on the part of O&R to engage in any transactions with a Respondent will only arise if and when a formal written contract is entered into between O&R and such Respondent.

Furthermore, the scope of this RFI may be revised at the option of O&R at any time, or this RFI may be withdrawn or cancelled by O&R at any time. O&R shall not be obligated or bound by any responses or by any statements or representations, whether oral or written, that may be made by the Company or its employees, principals, or agents in connection with this RFI.

If O&R and a Respondent were to enter a business transaction in connection with this RFI, there are a number of terms and conditions and special conditions that may be applicable to any such transaction, depending on the nature of the Respondents' response. Upon notifying the successful Respondent, O&R will share these terms and conditions and special conditions.



6.2 Important statement regarding confidentiality

O&R recognizes that a Respondent may wish to include information in its response to this RFI that the Respondent considers proprietary, a trade secret, or confidential to the Respondent. If any response or information (initial or supplemental) provided to O&R in connection with this RFI includes information considered proprietary, a trade secret or confidential, the Respondent shall identify such information by clearly marking “CONFIDENTIAL” on both the top and bottom of each page that contains such information. O&R will deem any such designated information as submitted to the Company and its designees, including any third-party advisors retained by the Company to assist in this RFI evaluation process, as confidential with the express understanding that, subject to any legally mandated disclosure requirements (including any such requirements of the PSC), such designated information will be held in confidence and will not be disclosed or used for any purpose other than the review and evaluation of the applicable response to this RFI or otherwise in connection with any resulting proposal from the Respondent or any resulting contract between O&R and the Respondent.

By responding to this RFI, Respondents are deemed to agree to keep O&R confidential information marked as such, provided that the foregoing confidentiality obligation shall not apply to any information that O&R has previously made generally available to the public.

6.3 Proprietary Information

If a proposal includes any proprietary data or information that a Respondent does not want disclosed to the public, Respondent must specifically designate the data or information as proprietary on each page on which it is found. O&R shall be held harmless from any claim arising from the release of proprietary information not clearly identified as such by a Respondent. Because of the need for public accountability, the following information regarding the proposal shall not be considered proprietary, even if such information is designated as such: pricing terms and non-financial information concerning compliance with RFI specifications.

6.4 Right to Reject

This RFI shall not be construed to establish an obligation on the part of O&R to enter into any contract, or to serve as a basis for any claim whatsoever for reimbursement of costs for efforts expended by any Respondent. Furthermore, the scope of this RFI may be revised at the sole option of O&R at any time, or this RFI may be withdrawn or cancelled by O&R at any time. O&R shall not be obligated by any statements or representations, whether oral or written, that may be made by the Company, its employees, principals, or agents in connection with this RFI.

O&R reserves the right to accept any responsive proposal, to reject any and all proposals, and to waive irregularities or formalities if deemed to be in the best interests of the Company. Any such waiver shall not modify any remaining RFI requirements nor excuse any Respondent from full compliance with all other RFI specifications and contract requirements if the Respondent is awarded the contract. O&R shall reject the proposal of any Respondent that the Company determines not to be a responsible bidder, or whose proposal the Company determines to be non-responsive.

O&R reserves the right to withdraw this RFI at any time and for any reason, and to issue such clarifications, modifications, and/or amendments as it may deem appropriate. Receipt by the Company of a response to this RFI confers no rights upon a Respondent, nor any obligations upon the Company.



6.5 Revision to this RFI

O&R reserves the right to make changes to this RFI by issuance of one or more addenda or amendments and to distribute additional clarifying or supporting information relating thereto. O&R may ask any or all Respondents to elaborate or clarify specific points or portions of their submission. Clarification may take the form of written responses to questions or phone calls or in-person meetings for the purpose of discussing this RFI, the responses thereto, or both.

If it becomes necessary to clarify, revise or amend this RFI (collectively "Addendum"), such Addendum shall be issued by the Company by letter, email, or written supplement to this RFI. Only those Respondents that have already received the proposal documentation directly from the Company will be provided the Addendum. Any Addendum to this RFI shall become part of this RFI and, if appropriate, part of the contract that derives from this RFI.

6.6 Duration of the Pilot and Customer Protection

While it is anticipated that the pilot may last for a limited time (*e.g.*, three to five years), the duration of any eventual agreement will be for a term agreed to by O&R and the Respondent during contract negotiations.

In addition, while O&R intends to own, operate, and maintain the shared thermal energy network, and provide the thermal energy to the connected customers, for the duration of the system's useful life (*e.g.*, 50 years), exit strategies and customer protections will be negotiated and built into the agreement to allow for potential early termination scenarios.