

Orange and Rockland Utilities, Inc.

Request for Information (RFI)

Electrification of Heating Demonstration Project

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Orange & Rockland



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1 Introduction

Orange and Rockland Utilities, Inc. (“O&R” or the “Company”) is requesting information from qualified vendors with the capability to deliver innovative solutions that provide value for key stakeholders, including the Company’s customers and shareholders, to partner in the development and execution of the Electrification of Heating demonstration project.

1.1 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”). 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 (“NYPSC” or “the Commission”).

This RFI solicits information from qualified parties (“Respondents”) to partner with O&R in the development and execution of this demonstration project. This RFI is a means by which O&R is complying with both the letter and spirit of the Commission’s Reforming the Energy Vision (“REV”) initiatives (see Section 4 below for further detail). However, in addition to regulatory compliance, O&R has objectives for this effort that go beyond simply executing a demonstration project. Specifically, O&R seeks to use this RFI process to increase transparency, broaden the potential solution set (particularly to those who lack a direct involvement with the REV processes), improve the efficiency of the process for both vendors and the Company, and produce actionable projects that align with customer interests. To that end, Respondents or others are encouraged to provide feedback on this RFI process to: ORUREVDEMOS@ORU.COM

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 qualified vendors who have presented ideas and concepts for a demonstration project related to the electrification of heating that, if implemented, would test the hypotheses outlined below and meet the other requirements set forth in this RFI. Such vendors should be able to provide actionable and verifiable results which the Company can use to inform the potential expansion of the demonstration project.

Any proposal should address each topic in Section 2 below. In addition to the submission itself, Respondents are encouraged – but not required – to submit spreadsheet models that provide additional detail/support for the value propositions and financials required in the response.

During the ongoing COVID-19 pandemic, O&R is fully committed to taking reasonable precautions to keep our customers and employees safe and informed. All proposals should address and adhere to “New York State on PAUSE Executive Order”¹ and subsequent Executive Orders, as well as the guidelines established pursuant to NY Forward.² All activities performed by respondent and their partners should be in accordance with all State

¹ Executive Order 202.6, issued March 18, 2020.

² <https://forward.ny.gov/>



Federal, or local rules and guidance including New York State Department of Health. Respondents may also refer to NYSERDA’s website³ for additional resources. The Company expects that potential respondents will adhere to these requirements during their proposal development. Any respondents awarded a contract will be required to submit detailed COVID-19 mitigation and safety plans.

1.2 Hypotheses to be tested

The electrification of heating, including air source heat pumps (“ASHP”) and ground source heat pumps (“GSHP” or “geothermal heat pumps”), is a viable heating solution in the Northeastern United States that is increasing its market share in the heating landscape. This technology is an important tool to assist New York State in achieving its aggressive clean energy goals. O&R is encouraged by recent steps taken by the State to encourage adoption of GSHP and ASHP. However, the complexity of electric heating adoption will vary with different building types and may not yet be economic for some building types or as a replacement for certain existing fuels. While electricity is a low carbon solution in a clean energy future, a transition to electric heating may take significant time and planning, particularly given the current state of heating economics, infrastructure investments, building turnover and equipment lifecycles. O&R believes that the utility can play an important role in this transition and offers this demonstration project to explore utility ownership, business models, and customer adoption of GSHP and/or ASHP.

GSHP and ASHP have the potential to change the heating industry in New York but have significant hurdles to overcome. These challenges include:

System and Infrastructure Concerns – System impacts of electric heating adoption will depend on the use and type of supplemental heat. Significant long-term electric heating penetration with electric resistance backup would require significant investments in distribution, transmission and individual service upgrades. The Company must thoroughly understand the impacts of this on forecasts and investments.

Upfront Cost - The upfront cost of these types of heating systems has been proven to be a barrier to customer adoption. In particular, ground loops associated with GSHP require significant investment and planning.

Education and Outreach – Awareness by both customers and contractors of the benefits and implementation of this technology is relatively low when compared to traditional heating solutions. Increasing education would support the further enablement of the market.

Ratepayer Impact – Utilities will need to understand and study the overall rate impact of these types of investments and the affordability for all customers, especially low- and moderate-income (“LMI”) customers.

The project will be designed to test whether utility ownership of heat pump technologies and/or infrastructure can provide savings to residential and/or commercial and industrial (“C&I”) customers and benefits to the electric and gas distribution systems, as well as reduce barriers to customer participation. The project is also intended to explore customer outreach, utility investment, rate design, and recovery models, with a specific focus on LMI

³ <https://www.nyserda.ny.gov/ny/COVID-19-Response>



customers. The project seeks to demonstrate a business model for the allocation of infrastructure costs, as well as the distribution of benefits to multiple stakeholders. If proven, the utility ownership model will provide an additional path for the acceleration of electrification of heating that may provide both greater value, and lower costs to customers.

To test the hypotheses, the project will seek to test the following:

- a) If utility ownership of heat pumps and other equipment/infrastructure can remove the burden of the upfront cost for customers and provide access to LMI customers;
- b) If utility ownership results in and/or enhances third-party participation in the electrification of heating market;
- c) If utility ownership of community ground loops, particularly for new construction, provides gas and electric distribution system benefits including the potential to support gas infrastructure needs, and the ability to allocate infrastructure costs favorably; and
- d) If utility outreach and education favorably increases the deployment of the technology.

1.3 Scope

The three-year demonstration project will consist of the deployment of utility-owned GSHP and ASHP infrastructure, as well as the study of various aspects of utility business models including but not limited to: rates and recovery, incentives and rebates, and outreach and education.

O&R anticipates the installation of at least one geothermal community ground loop infrastructure to support a new construction development for residential customers. It would be favorable if the community ground loop was installed in a new construction development suited for LMI customers. O&R will rely on each Respondent to propose the particular infrastructure and demonstration based upon Respondent experience within O&R's service territory. O&R will compare each Respondent's technical proposal and deployment costs, to the overall program budget to optimize the scope of the deployment.

The successful Respondent should expect to collaborate with internal O&R groups (*e.g.*, Utility of the Future, Distribution Planning, Gas Engineering, Customer Energy Services, New Business, Operations, and Regional Affairs) to identify and partner with potential host developments. Respondents should propose implementation and outreach plans for this collaboration. Under this structure, the Respondent and/or their partners will design and install the system(s). Respondents should identify preferred plans for operation, system monitoring, and maintenance.

O&R offers the following as potential areas (including postal zip codes) that may provide gas and/or electric infrastructure benefits:

- Washingtonville (10992);
- Chester (10918);
- Blooming Grove (10914);
- Monroe and Town of Palm Tree (10950);
- Harriman (10926); and
- Greenwood Lake (10925).



The type of deployment considered in this RFI produces operational and technical challenges which will require flexibility and coordination across multiple parties (e.g., utility, customer, developers) which does not currently exist. This project will develop and demonstrate these new processes and business models. It is expected that the successful Respondent will work with O&R to finalize the technical, financial, and operational structures necessary to facilitate the demonstration project. Respondents should detail any assumptions made in their response.

1.4 RFI Schedule

RFI Solicitation Milestones	Completion Date*
RFI Issued	July 23, 2020
Deadline to submit clarification questions	August 17, 2020
Responses to clarification questions due	August 24, 2020
Qualified Respondents' proposals due	September 21, 2020

*O&R reserves the right to change any of the above dates, particularly as a result of the ongoing COVID-19 pandemic.

Clarification questions, final proposals and supporting attachments are to be emailed to ORUREVDEMOS@ORU.COM . Vendor responses should be provided as .PDF documents with spreadsheets or models in .xlsx format.

O&R is aware that a failure to communicate to Respondents regarding the status of responses can be a source of frustration. To address that, the Company endeavors to provide every complete submission with a formal response, with the timing of that feedback dependent on the number of responses received. O&R anticipates partnering with a successful Respondent to develop the details for this demonstration project. Once the evaluation phase is complete, O&R will communicate with Respondents to provide details on next steps.

1.5 Evaluation Approach

Proposals submitted in response to this RFI will be reviewed in detail by O&R. O&R will use an evaluation framework to assess the proposals.

The main criteria are provided below.

1. Proposal content – Information requested has been provided and is comprehensive to allow for evaluation;
2. Viability – The extent to which Respondent’s proposed solution would meet the demonstration project’s goals as mentioned in this RFI;
3. Technology – Technology maturity, ability to scale, challenges in deployment;
4. Safety and Environmental/Community Impacts;
5. Cost – Total cost for the proposed solution;
6. Revenue streams – Details and estimates of potential vendor and utility revenue streams throughout the duration of the demonstration project (i.e., operation and maintenance)



7. Timeliness – The ability to deploy the technology in a timely manner;
8. Respondent Qualifications – Respondent’s relevant experience and success providing these solutions to other locations, including reference checks and documented results;
9. Applicability to REV – Supports the goals and objectives outlined in the REV Proceeding; and
10. Feasibility – The expected ease of demonstration project implementation within the timeframe required for the project (*e.g.*, permitting, construction risks, operating risks); siting, customer acquisition and other challenges.

1.6 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 REV demonstration 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 will 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.

Respondents should state clearly all assumptions they make about the meaning or accuracy of information contained in their response to this RFI. If a Respondent does not ask questions or identify its assumptions, O&R will assume that the Respondent agrees with and understands the requirements in this RFI. While O&R has endeavored to provide accurate information to Respondents, O&R makes no warranty or representation regarding the accuracy of the information contained in this RFI.

Respondents are encouraged to provide and release necessary authorizations for O&R to verify any of such Respondent’s previous work, except where a Respondent is contractually prohibited from doing so.

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 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 person or entity in any manner whatsoever. A legal obligation on the part of O&R to engage in any business transaction with a Respondent will only arise 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 into 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.

1.7 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, please 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, 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 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.

2 Demonstration Proposal

This Section outlines the requirements for responses to this RFI. Respondents should provide the following:

2.1 Executive Summary

Respondents should provide a brief summary of their proposal including background, any identified or participating customers and partners, a clear and concise explanation of the model to be demonstrated, a basic overview of how value will be distributed between key constituents, a description of how success or failure will be measured at the end of the demonstration project, and address any other topics necessary for a basic



understanding of the proposal. Please note that O&R asks for these items in greater detail later in this RFI, so Respondents should focus on providing a concise high-level summary here.

2.2 Unique Value Proposition

Respondents should recall the key hypothesis that O&R is testing as part of this RFI. The following Section is therefore an important input in beginning to prove/disprove this hypothesis. To that end, Respondents should provide as much detail and supporting evidence as possible in the following Sections. The goal is to explain – as clearly and comprehensively as possible – the unique value propositions proposed as part of this demonstration.

Please note that O&R encourages – but does not require – Respondents to submit much of the detailed information in this Section as an Excel file, included as an appendix to the response. That Excel file can be in a format of the Respondent’s choosing. If submitting an Excel file, Respondents are encouraged to include a basic sensitivity analysis. Such an analysis should identify the range of inputs to a given variable (if known) and demonstrate the degree to which that variance of inputs affects the output. Regardless of whether a Respondent submits an Excel file or not, all are expected to fill out the required Word sections that follow with a written response to each category below.

2.2.1 Summary

Please briefly describe the value proposition in its entirety. Clarify which services and benefits will be provided to which party, including the Company, the Company’s customers (both participating and non-participating), other partners, and the Respondent. Please briefly explain how capital and operational costs would be allocated (note: the budget will be discussed in greater detail in Section 2.5).

2.2.2 Participating Customers

Please describe in greater detail what services and benefits are provided to the O&R Customer(s) participating in the demonstration. Please also clarify who will pay for these services. Please identify any key assumptions regarding the value proposition provided to the participating O&R Customer(s). Finally, provide evidence to support key assumptions, and evidence to support the hypothesis that whoever is paying for these services will in fact do so, at the price point proposed. Please also provide a high-level breakdown on benefits, costs and other associated economics pertaining to any proposal.

2.2.3 Third Party Partner(s)

Please describe the services provided by, and/or to, the project Respondent and key Respondent partners.

2.2.4 O&R

Please describe the services and benefits provided by, and/or to, O&R as part of this demonstration. Where relevant, please distinguish between those services where O&R is the sole provider and/or recipient, and those services where O&R shares either provision or receipt of services with a third party. Please clarify the sources of any revenue O&R will receive as part of this demonstration. Please describe the types of support O&R is being asked to contribute (*e.g.*, capital costs, customer support, operational and maintenance costs). Finally, identify key assumptions and provide evidence to support those assumptions.



2.3 Demonstration Plan

Respondents should address, in greater detail than in the executive summary, exactly what they plan to demonstrate over the course of the project. This Section should clarify the key hypotheses that the demonstration will test and how the plan will seek to prove/disprove those hypotheses.

2.3.1 Metrics for Success

Please identify key metrics that will be used to determine if the hypotheses prove true and explain the rationale for selecting these metrics.

2.3.2 Data Collection

The data collected over the course of this demonstration project will serve as the evidence to prove/disprove key hypotheses. For this reason, Respondents should consider carefully which sources of data are necessary and how such data will be collected and transmitted to O&R. In this Section, please describe the key pieces of data to be collected in this demonstration, why this data is important/necessary for proving hypotheses, and how it will be captured. As part of O&R's regulatory requirement to report progress and key lessons learned regarding REV Demonstration projects, the Respondents should expect to share all technical and financial information with the Company. If Respondents are concerned about sharing project-related technical and financial data with the NYPSC, please discuss those concerns in this Section, and explain the data/information in question.

2.3.3 Timelines/Milestones

Please provide high level timelines and milestones for the project. For reference, please see below for a template based upon O&R expectations and experience. If there are critical steps or detail missing, Respondents should edit or add-on, as appropriate.

1. Demonstration Planning
 - a. Collaborate with O&R to refine scope;
 - b. Support O&R's drafting and filing of the Implementation Plan; and
 - c. Contract Negotiation and Execution.
2. Customer Adoption and Site Selection
 - a. Financial and technical analysis to identify project site(s) and/or customer(s);
 - b. Contracting for site;
 - c. Design, engineering, and procurement; and
 - d. Construction, commissioning.
3. Operations
 - a. Gather operational data; and
 - b. Analyze rates along with supporting analysis, load profiles etc.

2.3.4 Proposed Project Measurement & Verification

Respondents should address how they plan to measure and verify performance. In addition, Respondents should clarify how they – or other project partners – will measure and verify proposed savings or benefits.



2.3.5 Utility Resources and Capabilities

To the extent this topic has not already been addressed in this Section, Respondents should identify assumptions regarding the resources and capabilities it expects O&R to provide to this demonstration project.

2.4 Third-Party Partners

One key priority for REV demonstration projects is partnerships between utilities and third-party service providers. O&R is interested in responses with ready-made partnerships with parties who demonstrate experience in electrification of heating.

2.4.1 Vendors

Please describe partnerships with other vendors who are part of this demonstration proposal. Describe the nature of this partnership, explain why these partners were chosen, and what products/services they will provide.

2.4.2 Siting

O&R has not and will not pre-select a demonstration site(s). However, O&R fully appreciates that siting and permitting a demonstration location could be a major timing and deployment risk to this effort. Therefore, this RFI seeks responses that either have a particular site identified or – at a minimum – have clear siting requirements that can result in O&R and the applicant collaborating to identify eligible sites together.

Within this context, Respondents should address whether the Respondent has identified a site for the proposed demonstration. If the Respondent has not identified a site, please describe in detail the desired or required criteria for a demonstration location. Please also describe, briefly, any relevant previous siting or permitting experiences.

2.4.3 Host Customers

Respondents should address whether they have acquired customers in O&R's service territory for the proposed demonstration. If Respondents have not acquired customers, please describe the customer acquisition plan (including education), short-term and long-term communication plan, and sales and marketing strategies associated with each relevant customer segment, including the timing of, and funding required for, acquiring customers. Respondents should provide marketing and sales plans for each customer segment to be targeted.

Respondents should include a description of the customer segments, such as multifamily buildings, small commercial (*e.g.*, retail stores, restaurants), large commercial (*e.g.*, office buildings, industrial), and government or institutional (*e.g.*, hospitals, hotels, schools, colleges), and the applicable demand and energy management measures and technologies to be directed at each selected market or customer segment.

2.4.4 Other

Respondents should describe any other partnerships that will support this demonstration project. Other partners could include those that do not clearly fall into the categories above (*e.g.*, industry associations; third-party testing, measurement, and verification firms; financing partners). Respondents should note that partnerships that do not clearly advance the goals of the demonstration set forth above and/or add costs with no clear benefit are



not desired. Respondents should note if and how their proposal works in conjunction with the Companies existing energy efficiency and heat pump programs.

2.5 Financials

The Company is interested in the financial value and impact of the demonstration project. Therefore, Respondents should provide as much detail as necessary to address the following Sections, identifying key assumptions. This Section focuses on the financials of the demonstration project during the period of the project and is not focused on long-term projections (longer-term projections are discussed in the post-demonstration benefits, and scalability Sections).

2.5.1 Summary

Please provide an estimated budget for the project proposed. This budget should include key cost categories, incurred by quarter, and should clearly identify any underlying assumptions.

Please note that the Company encourages – but does not require – Respondents to submit much of the detailed information in this Section as an Excel file, included as an appendix to the response. That Excel file can be in a format of the Respondents’ choosing. If submitting an Excel file, Respondents are encouraged to include a basic sensitivity analysis in that submission. Such an analysis should identify the range of inputs to a given variable (if known) and demonstrate the degree to which that variance of inputs affects the output.

Please provide any financial projections related to the project. In particular, the financial project and revenue forecast should reflect benefits and costs for all participating stakeholders (*i.e.*, O&R, project site(s)/customer(s), and the Respondent).

2.5.2 Utility Revenue Streams

O&R strongly encourages Respondents to propose alternative utility revenue streams to be tested as part of this demonstration project. Respondents should identify the nature, timing, and amount of revenue. Please also identify assumptions. Respondents are encouraged – but not required – to include a basic sensitivity analysis of the numbers presented in this Section.

2.5.3 Investments

If the Company or other project participants are expected to make investments in this demonstration project, please identify the nature, timing, and amount of investment. Please also identify assumptions. Respondents are encouraged – but not required – to include a basic sensitivity analysis of the numbers presented in this Section.

2.5.4 Returns

Respondents should choose and support a relevant measure of return (*e.g.*, cash-on-cash, IRR, ROI). Please identify the returns on the project (if any) attributable to each participant. If there are no financial returns received as part of this project, please identify the assumptions or scenarios under which such returns could eventually be realized. Respondents are encouraged – but not required – to include a basic sensitivity analysis of the numbers presented in this Section.



2.5.5 Cost-Effectiveness

Respondents should describe why this project is cost effective. Specifically, please demonstrate that the Respondent’s approach, vendors, and technology proposed are the most cost-effective option. If a given part of the demonstration is not the most cost-effective option, Respondents should describe why a less cost-effective option is not appropriate.

2.5.6 Sources of Funding

Please clearly identify the sources of funding for the proposed demonstration. Please also note that third-party capital contribution is a basic principle of REV demonstration projects. Respondents should also identify if private sector funding will be used or is available. Note that the Company is also interested in using other potentially available funding streams, such as State and Federal grants or incentives, to mitigate the overall demonstration cost.

2.6 Technology/Solution Description

Respondents should explain the key technology/solution proposed for the demonstration project, in the appropriate categories listed below. Respondents are welcome to include relevant supporting data – such as third-party testing or validation – as an attachment. If including such data, please explain its relevance.

2.6.1 Performance Characteristics

Please describe the performance characteristics listed below. Answers in this Section should conform to estimates of the actual devices to be installed during the demonstration project recognizing that site selection may not be complete at the time of response. Respondents are welcome to include supporting performance data or characteristics as a separate attachment.

2.6.1.1 Description of System Proposed

Respondents should provide a description of the type of overall system proposed, such as: water to water, water to air, water to air spilt system, and the type of heat exchanger planned (*e.g.*, closed loop).

2.6.1.2 Description of Heat Exchanger

Respondents should provide a description of the type of heat exchanger proposed, such as: water to water, water to air, water to air spilt system, and open or closed loop system

2.6.1.3 Maintenance Requirements

Please describe the nature of expected maintenance throughout the project’s useful life.

2.6.1.4 Standards

Please detail all applicable industry standards the technology/solution will satisfy (*e.g.*, ASHRAE, IGSHPA).

2.6.1.5 Other

Please detail all other performance characteristics of the technology/solution. Include details on proposed plans for hot water heating, if any.



2.6.2 Measurement & Verification to date

Please provide measurement and verification information to support the claims made in the Section above. Please indicate whether this information was provided by a third-party.

2.6.3 Software/Analytics

Please provide a description of data that would be available, additional software, thermostat controls, or analytical capabilities that may be provided.

2.6.4 Safety/Permitting

Respondents should demonstrate familiarity with safety, permitting, and approval processes. Please also address whether the technology/solution meets applicable ASHRAE and IGSHA standards. All respondents should provide details on how they will address health and safety as it relates to the ongoing COVID-19 pandemic and comply with applicable Federal, State and local requirements and guidelines.

2.6.5 Environmental & Community Impacts

O&R wants to avoid or mitigate any detrimental environmental impacts of the proposed demonstration project. Please address each of the following points.

2.6.5.1 Environmental Impacts:

Please list and describe key environmental impacts prior to, during, and after the proposed demonstration project, including impacts of well drilling.

2.6.5.2 Waste Disposal

Please describe plans for disposal of waste prior to, during, and after the proposed demonstration project.

2.6.5.3 Remanufacturing, reuse, recycling

Please describe any opportunities for remanufacturing, reuse, and recycling of the technology/solution.

2.6.5.4 Noise impacts

Please describe any noise impacts the technology/solution will have on the surrounding community.

2.6.5.5 Other disruption

Please describe any and all other types of disruption the technology/solution could present to the community.

2.7 Post-Demonstration Benefits

Respondents should provide a summary of the benefits expected to accrue to all relevant parties (*e.g.*, the Company, customers, vendors/third parties) as part of the demonstration project, as well as those that are expected to last beyond the demonstration period. Please clearly identify the assumptions necessary to achieve the expected benefits.



2.7.1 Qualitative

Please describe any qualitative benefits that will result as part of the demonstration project. Please identify which party will receive the benefits in question. Benefits more difficult to define or quantify should be addressed in this Section, and could include improved operational knowledge, or other knowledge/operational benefits for the Company. Respondents should clarify why they expect these benefits to result and identify any assumptions necessary to achieve the expected benefits.

2.7.2 Quantitative

Please identify metrics, including specific numeric values, which will result as part of the demonstration project. Respondents are welcome to support the assertions in this Section with an Excel document submitted as a supporting attachment.

2.7.3 Ability to Scale

Respondents should address the ability for their technology to continue to scale beyond the demonstration period to expand to additional customers, and/or at more points in the Company's system, assuming a successful demonstration.

2.8 Privacy and Cybersecurity

The data collected as part of this demonstration project is of utmost importance. That data will help to prove or disprove the core hypothesis articulated in this document. The data collected will also help to prove or disprove the other related hypotheses the Company has articulated. Moreover, it is critical that the Company and Respondents collect, store and maintain data from this demonstration project in a way that protects the Company's and its customers' privacy, and maintains the highest cybersecurity standards.

2.8.1 Privacy and Cybersecurity

Respondents will be required to meet the Company's Privacy and Cybersecurity standards; this may include completing a successful Vendor Risk Assessment and/or executing Data Security Agreements.

2.9 Commitment to New York

In the Commission's Memorandum and Resolution on Demonstration Projects, issued December 12, 2014 to support the REV Initiative,⁴ the Commission calls for demonstration project partners to demonstrate a "willingness to invest in the New York market." Within that context, Respondents should address whether they and their key project partner(s) are based, or have offices in, New York State. If the Respondent is neither based nor has offices in New York State, please provide evidence of commitment to enter or invest in the New York State market.

2.10 Key risks

Respondents should complete this Section as comprehensively as possible. The Company is well aware that there are risks associated with undertaking an innovative and relatively novel project. Respondents should not dismiss

⁴ Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision* ("REV Proceeding").



or minimize the natural and very real risks associated with this demonstration project. Instead, the Company expects Respondents to identify all meaningful risks, explain why these have been identified, describe the likelihood and severity of risks, and provide a brief explanation for how each risk could be mitigated or avoided.

2.11 Relevant experience

Respondents' previous experience with similar efforts is of high importance to the Company. This Section should describe other previous or ongoing efforts similar to the demonstration project proposed in this application and how those efforts would inform this project.

2.12 References

Respondents should include references, including basic contact information such as email addresses and phone numbers, so that the Company can learn more about the Respondent's prior work. The best references will be those who were involved in efforts similar to the demonstration project being proposed here.

2.13 Team

In a separate attachment, Respondents should include curriculum vitae ("CVs") for key team members, including demonstration project partners. Respondents should also describe each listed team member's role on the proposed project.

3 Instructions to Respondent

3.1 Response and Submittal Instructions

Responses will be submitted by email to: ORUREVDEMOS@ORU.COM. Please format the email subject line as follows: "ORU ELECTRIFICATION OF HEATING DEMO": "Company Name", "[Purpose]" (*i.e.*, Purpose may be "Clarifying Question" or "Proposal")

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 solution, O&R will contact the Respondent and provide additional details regarding the process subsequent to this submission that will ultimately lead to a demonstration project.

Any questions or clarifications concerning this RFI should be directed to O&R at ORUREVDEMOS@ORU.COM. The deadline to submit questions via email is 5:00 PM EST on August 17, 2020. 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 submitted via email to all potential Respondents August 24, 2020 All proposals are due to the above-mentioned email address by 5:00 PM EST on September 21, 2020. The Company will have no obligation to evaluate late submissions, nor be responsible in any way for any consequences associated with late submissions.



3.2 Response Format

3.2.1 Cover Letter

The cover letter shall include the following:

- The legal name and address of Respondent;
- The name, title and telephone number of the individual authorized to submit information; and
- A statement that the Respondent has read, understands, and agrees to all provisions of this RFI.

3.2.2 Table of Contents

Include a clear identification of the response by Section and by page number as identified above.

3.2.3 Demonstration Proposal

This Section should include the items outlined in Sections 2.1 – 2.12 above.

3.2.4 Team

This is a response to Section 2.13 above. As a separate PDF attachment, Respondents should include CVs for all key team members, including project partners and subcontractors. Respondents should also describe each listed team member's role on the proposed demonstration project.

3.2.5 Glossary of Terms

Respondent should provide a glossary of terms that is specific to the Respondent's proposed demonstration project.

3.2.6 Supplemental Information

Respondents should include any supplemental or supporting attachments, as separate documents, in this Section. These could include, but are not limited to, detailed information regarding the unique value proposition proposed, detailed budget/financials, evidence to support key assumptions, and letters of support. Submissions can be provided in either Excel or PDF format, depending on the nature of the attachment. Respondents should not include attachments in any other format.

If Respondents should clearly label and number each attachment, if they submit more than one attachment.

3.3 RFI 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 should 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.



Any exceptions to the terms, conditions, provisions, and requirements herein must 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.

Respondents agree to keep confidential all information marked as such by O&R, in connection with this RFI.

3.3.1 Qualifications of Respondents

The Company may make such investigation as the Company deems necessary to determine the qualifications of Respondent and its proposed subcontractors to perform the work. A Respondent should 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.

3.3.2 Proprietary Information

As stated in Section 1.7 above, 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.

3.3.3 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 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 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.

3.3.4 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. Any Addendum shall be delivered by hand, certified mail, facsimile, e-mail or delivery by courier service which certifies delivery. 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.

3.3.5 Basis of Contract Award

Any contract award(s) that may be made by the Company shall be made to the most responsive and responsible Respondent meeting the specifications, price and other factors considered, as determined by the Company, at its sole discretion. The proposal evaluation criteria are set forth within this RFI.

3.3.6 Duration of the Contract

While the REV Demonstration period may last for three years from contract execution, the duration of the contract will be for a term agreed to by O&R and the Respondent during contract negotiations and will depend on the parameters of the proposed solution(s). In the event that the Company determines not to proceed with the demonstration project after contract execution, the successful Respondent will be paid in accordance with the amounts as set forth in the contract between Respondent and the Company.

3.3.7 Underperformance

Respondents should note that failure to deliver commitments may result in liquidated damages and/or other consequences provided for in the contract between Respondent and O&R.

3.3.8 Security

Respondents are put on notice that if a Respondent's solution is selected, then Respondent will be required to furnish security to O&R that demonstrates, among other things, financial capability to pay liquidated damages in the event that the Respondent fails to satisfy its contractual requirements during the period required.

3.3.9 Subcontracting and Assignment

No portion of the work associated with any project resulting from a successful response to this RFI by a Respondent may be delegated, subcontracted, assigned, or otherwise transferred without the prior written approval of the Company in each case.



4 Appendices

4.1 NYSPSC Memorandum and Resolution on Demonstration Projects

On December 12, 2014, the Commission issued a Memorandum and Resolution on Demonstration Projects. That order describes ten guiding principles⁵ for REV demonstration projects.

4.2 REV Demonstration Principles

The Commission’s Memorandum and Resolution on Demonstration Projects describes ten guiding principles for REV demonstration projects. Respondent proposals should satisfy these criteria. Set forth below, is a brief description of re-statement of each key principle and a description, *in italics*, of how this RFI process addresses them:

1. **Flexibility:** The Commission does not intend “to specify the types of project expected but instead to establish guiding criteria.” *The Company has not specified the type of project but has outlined guiding criteria of a successful Respondent’s proposal.*
2. **Demonstrating Innovation:** NYSPSC wants utilities to have “a portfolio of demonstration projects to test various technologies” that include “various DER technologies and products that can be integrated into the utility distribution system planning and operations; customer engagement and response; and DSP technologies that will allow for the integration, visualization, and market operations related to DERs.” *The Company is looking to explore electrification of heating on varying levels from integrating the technology into the system to customer engagement as explained in the Hypothesis to be Tested, Section 1.2 above.*
3. **Value Distribution:** The Commission seeks a clear delineation of how generated economic value is divided between the customer, utility, and third-party service provider. It also seeks a proposal for how much capital expense should go into the rate-base versus competitive markets. *Any successful response should be clear on the division of economic value between each key constituent. An intended outcome of this demonstration – like other demonstration projects – is to shed light on optimal recovery mechanisms.*
4. **Partnerships:** The Commission seeks partnership between the utility and the third-party service provider with the goal of a significant third-party capital contribution. *This RFI seeks to identify specific partners best suited to execute these objectives. Any successful response will require partnerships, likely multiple partnerships, and will also require third-party capital.*
5. **Customer Engagement:** The Commission states that “customer engagement and measuring customer response to DER and data sharing will be a crucial element of these demonstrations.” *The Company is requesting to explore the effectiveness of outreach and education and expects successful Respondents to have an effective strategy and process for maximizing value to – and engagement with – customers.*
6. **Market Solutions:** The Commission states, “utilities should identify the problem and the market should propose solutions.” *The Company fully supports this statement. This RFI seeks to describe the Company’s “problem” or objective, and let the market propose specific solutions.*
7. **Developing Competitive Markets:** The Commission desires demonstration participants to propose rules that will help to create competitive markets. *This RFI focuses heavily on “experiment” or demonstration design in*

⁵ <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A846946F-6C99-40A2-8CFC-B2EB0CC5AC9A}>



an attempt to derive the information necessary to produce an informed perspective on what an optimal competitive market might look like.

8. **Ensuring Cyber-Security:** The Commission desires to “maintain customer data privacy and keep platform operations safe.” *This RFI asks Respondents to address these specific issues in Section 2.8 above.*
9. **Scalability:** The Commission wants to “ensure the scalability of the technologies and products tested.” *This RFI asks Respondents to address these specific issues in Sections 2.2.6 and 2.7.3 above.*
10. **Cost Recovery:** The Commission asks utilities to “bring proposed cost allocation methodologies and cost recovery mechanisms to the Commission for consideration.” *Successful Respondents will envision and articulate these mechanisms as part of their responses.*