

**Request for Proposals:  
RFP #51205  
Smart Thermostat Performance Metrics**



## Table of Contents

1	Introduction .....	2
2	Background.....	2
3	Objectives.....	2
4	Applicable Documents and Definitions.....	2
4.1	Definitions.....	3
5	Contractor Qualifications.....	3
6	Scope of Work.....	4
6.1	Phase 1 Activities.....	4
6.2	Phase 2 Activities.....	4
6.3	Deliverables .....	4
6.4	Outside the Scope .....	4
6.5	Timeline and Budget.....	5
7	Proposal Submission .....	5
7.1	RFP Schedule.....	5
7.2	RFP Point of Contact.....	5
7.3	Intent to Respond.....	5
7.4	Proposal Format.....	6
8	Selection & Preferred Insurance.....	6
8.1	Scoring.....	6
8.2	Preferred Insurance .....	7
	Appendix A - Intent to Respond Form .....	8

## 1 Introduction

### About the Northwest Energy Efficiency Alliance

The Northwest Energy Efficiency Alliance (NEEA) is an alliance of more than 140 utilities and energy efficiency organizations working on behalf of more than 13 million energy consumers. NEEA is dedicated to accelerating both electric and natural gas energy efficiency, leveraging its regional partnerships to advance the adoption of energy-efficient products, services and practices.

Since 1997, NEEA and its partners have saved enough energy to power more than 900,000 homes each year. As the second-largest resource in the Northwest, energy efficiency can offset most of our new demand for energy, saving money and keeping the Northwest a healthy and vibrant place to live. [www.neea.org](http://www.neea.org)

## 2 Background

A group of Northwest utilities and energy efficiency organizations met in mid-2018 to develop a regional research project for Smart Thermostats. The Smart Thermostat Savings Task Force Research Strategy (“Research Strategy”) final document developed through this process is available for review at: <https://conduitnw.org/pages/file.aspx?rid=4697>. A free Conduit registration is required to access the document and RFP bidders are strongly encouraged to study the Research Strategy and its supporting research carefully.

This Request for Proposals (RFP) is part of a regional research project that is a collaboration between NEEA, the Bonneville Power Administration, Chelan County PUD, Clark County PUD, Energy Trust of Oregon, Northwest Power & Conservation Council, Puget Sound Energy, Seattle City Light, Snohomish County PUD, and Tacoma Power (collectively “NEEA and Stakeholders”). NEEA, as a regional organization that regularly conducts research on behalf of utilities throughout the region, was asked to manage this research project on behalf of the Stakeholders.

## 3 Objectives

The overall objective of this research project is to create a method to estimate energy savings for low voltage Smart Thermostats based on performance metrics defined in the Research Strategy. The selected contractor will implement Phases 1 and 2 of the Research Strategy as described in Section 6 below.

## 4 Applicable Documents and Definitions

Bidders should reference the Research Strategy for more detailed information, including suggested approaches and methodologies.

## 4.1 Definitions

Acronym / Term	Definition
<b>Bidder(s)</b>	Those who respond to this RFP
<b>Contractor(s)/Contractor Team</b>	The firm(s) awarded the work outlined in this RFP
<b>Funders</b>	Northwest utilities and efficiency organizations (in Idaho, Montana, Oregon and Washington) funding NEEA to achieve energy savings targets in 5-year cycles
<b>NEEA</b>	<a href="#">Northwest Energy Efficiency Alliance</a>
<b>Region</b>	NEEA's region includes Idaho, Montana, Oregon and Washington
<b>RFP</b>	Request for Proposal
<b>RTF</b>	Regional Technical Forum. To learn more, visit the RTF's website <a href="#">here</a> .
<b>Smart Thermostat</b>	<p>Consistent with the ENERGY STAR® definition, Smart Thermostats are programmable, internet-connected devices that incorporate the following features:</p> <ul style="list-style-type: none"> <li>• Occupancy sensing (e.g. proximity, geo-fencing, or other techniques to determine occupancy).</li> <li>• Adaptive control to optimize performance based on user behavior and weather conditions.</li> <li>• Basic demand response capabilities allowing remote connection with utilities.</li> </ul> <p>Provide control for electric heat pumps, gas forced air furnaces, electric forced air furnaces, and central A/C systems.</p>

## 5 Contractor Qualifications

The selected contractor must be well qualified, with proven experience in the following areas:

- Large-scale field experiment design and implementation, including thermostat and HVAC field studies
- Development of complex sampling plans
- Participant recruitment
- Device data and billing systems data collection design and implementation, including administering data-sharing agreements with third-parties
- Analyzing and interpreting complex energy and performance data
- Publication-quality reporting
- Experience working with the Northwest's [Regional Technical Forum](#) (RTF) a plus, but not required

## 6 Scope of Work

The selected contractor shall work with NEEA, on behalf of project Stakeholders, to implement Phases 1 and 2 of the Research Strategy. Proposals should be structured around the activities and deliverables for both project phases as described below. Note that Phase 1 and Phase 2 terminology from the Research Strategy is maintained here for clarity and consistency, but bidders are free to adjust the activities timing to improve results, reduce costs, or minimize risks. Page numbers below refer to the Research Strategy document.

### 6.1 Phase 1 Activities

- Determine deemed energy savings from specific Smart Thermostat products and applications with sufficient reliability.
- Develop and verify a methodology to estimate energy savings for smart thermostats based on product characteristics and performance metrics, in the following applications:
  - Heating and cooling in each NW climate zone;
  - By major HVAC types including heat pumps, gas forced air furnaces, electric forced air furnaces, and central A/C systems
  - To include site built, multi-family and manufactured homes in construction types. (pgs. 1-20)

### 6.2 Phase 2 Activities

- Determine savings shape/profile for smart thermostats (pgs. 10, 18-20). See in particular page 19 for the recommended approach, difference of comparison groups (difference in differences).
- Determine smart thermostat control of variable speed HVAC systems based on quality of available data (pgs. 9-10, 20)

### 6.3 Deliverables

- Overall Project plan.
  - Data Collection Plan and Draft Analysis Plan – including data sharing agreements, baseline data collection, smart thermostat/HVAC system performance, and a draft analysis plan that reflects the actual data sharing agreements and anticipated data.
  - Baseline and installed smart thermostat data – 9 to 12 months.
  - Data analysis plan.
- Data analysis results – with appropriate spreadsheets, presentations, and written memos.
- Inventory of variable capacity HVAC compatible smart thermostats.
- Savings profile that represents the difference in hourly end-use load profile before and after installation of a measure for smart thermostats.
- Final written reports and presentations (may require both webinar and in-person presentations)

### 6.4 Outside the Scope

The following are mentioned in the Research Strategy but explicitly not included within the scope of this RFP:

- Smart thermostat control of “hybrid” systems DHP + eFAF (pgs. 9, 16-17)

- Line Voltage Smart Thermostats (pg. 9)
- Smart Thermostat Software and Solutions (pg. 9)

As mentioned above, NEEA will be working with a group of regional Stakeholders to manage this project. While the vendor will be expected to provide presentations and updates to this stakeholder group during the course of the project, NEEA will be responsible for consolidating and synthesizing direction and feedback and providing this to the vendor.

## 6.5 Timeline and Budget

The work is expected to commence in early September 2019.

The work is expected to conclude in Q2 – Q3 2020.

**Note on budget:** The Research Strategy contains Rough Order of Magnitude (ROM) estimates of budgets that have been used for planning and scoping purposes. The range of estimates provided in the Research Strategy should not be construed as minimum or maximum values for the budget of this RFP. Bidders are encouraged to provide creative, cost-effective solutions to maximize the value of this work.

## 7 Proposal Submission

Bidder shall submit (1) electronic copy of the proposal by the end of business day listed in the RFP schedule below.

### 7.1 RFP Schedule

6/07/2019	Intent to bid submission due by
6/07/2019	Questions submitted by
6/13/2019	Answers to questions e-mailed back by
6/21/2019	Written proposals due by
7/11/2019	Finalists' presentations completed by
7/15/2019	Contract award date
9/06/2019	Expected contract start date

### 7.2 RFP Point of Contact

All correspondence, included but not limited to, questions and submissions shall be directed to:

Tamara Anderson  
 Program Coordinator  
 E-mail: [tanderson@neea.org](mailto:tanderson@neea.org)

Northwest Energy Efficiency Alliance  
 421 SW 6<sup>th</sup> Avenue, Suite 600  
 Portland, OR 97204

### 7.3 Intent to Respond

All "Intent to Respond" forms (see Appendix A) must be received no later than the end of business day listed in the RFP Schedule.

Only those parties submitting the “Intent to Respond” form will be provided with updates to the RFP, have questions responded to and have their proposals considered.

## 7.4 Proposal Format

Bidders should note that proposals MUST adhere to the page limits noted below. Core proposals must be no longer than 15 pages (one page is a single side of a page, not including the Appendix) and include the following components:

1. **Executive Summary** (2-page maximum)– Include the key strategies and approach to completion of the scope of the work; proposed costs; and the reasons NEEA should select your team
2. **Approach to Project (Tasks and Deliverables)** (10 page maximum) – Provide a detailed description of the specific methodologies and approach to be undertaken to complete the scope. Be sure to include project management activities and proposed implementation strategy as well. Identify all major phases and milestones for the project and the associated deliverables.
3. **Project Timeline & Cost Estimate** (3 page maximum) - Provide the proposed timeline for all major phases and milestones of the project broken out by proposed task and associated deliverables. Include the cost estimate for each task. A breakout of any direct costs and an hourly rate sheet for the project period may be included here or in the Proposal Appendix section.
4. **Proposal Appendix Items:**
  - Hourly Rate Sheet – Provide the hourly rate and estimated number of hours for each project team member, by task (required if time & materials)
  - Company Background & Qualifications
  - Project Team & Team Bios – Include information about project team members and team structure, past team efforts on similar work, years of experience and other relevant qualifications.
  - References – Provide three (3) references for similar work conducted.
  - In Good Standing – Provide documentation reflecting your organization’s good financial standing, such a Dun & Bradstreet report (\*\*required for new vendors)

## 8 Selection & Preferred Insurance

### 8.1 Scoring

Bidding firms will be rated among others in terms of the overall responsiveness to the RFP – how well all RFP requests have been addressed including, but not limited to:

1. Responsiveness to the RFP and proposal format, and demonstrated understanding of the issues surrounding the project.
2. The thoughtfulness and appropriateness of the proposed research methodology used to accomplish the desired results of the project.
3. The experience and qualifications of the individuals specifically proposed to execute and manage the project. (Note: Proposed staffing is a significant factor in bidder selection. As such, no changes in key staff / substitutions or changes in

roles/responsibilities can be made without the written agreement of NEEA project manager.

4. The experience of the firm or team of firms making the proposal including experience with conducting studies similar to the one proposed, experience with project management with multi-disciplined approaches, experience with large-scale field experiment design and implementation, experience with complex sampling plan development, and experience with device data and billing systems data collection design and implementation.
5. The capability to execute the plan, including past experience and aptitude for collaboration.
6. Creative, cost-effective solutions within budget to maximize the value of the work; overall value for expenditure.

Proposals will be evaluated by NEEA staff and a Stakeholder review team that have the perspective needed to make this important decision. NEEA is under no obligation to provide work to any vendors responding to this solicitation, nor is there any obligation or intent implied to reimburse any party for the cost of preparing a proposal in response to this RFP.

## **8.2 Preferred Insurance**

Firms interested in working with NEEA should be aware of the following insurance requirements for all NEEA vendors.

Vendors must maintain adequate and reasonable insurance covering their performance under any offered contract, including, but not limited to Commercial General Liability of at least \$1,000,000/occurrence, Business Automobile Liability insurance, and any workers' compensation and unemployment insurance required by law. Professional Liability insurance may also be required. NEEA may request a copy of such insurance policies prior to awarding work.

See sample terms and conditions for additional information about minimum insurance requirements: <https://neea.org/img/documents/sample-neea-contract-terms-and-conditions.pdf>.

# Appendix A - Intent to Respond Form

## RFP # 51205

Project Title: Smart Thermostat Performance Metrics  
NEEA Point of Contact: Tamara Anderson, Program Coordinator  
[tanderson@neea.org](mailto:tanderson@neea.org)

Refer to section: Point of Contact for more details

### PLEASE PRINT:

<b>Company</b>	
<b>Address</b>	
<b>City, State, Zip</b>	
<b>Contact Name</b>	
<b>Contact Title</b>	
<b>Phone #</b>	
<b>Fax #</b>	
<b>E-mail</b>	

The company named above intends to submit a proposal in response to NEEA's request for proposal listed above. Deadline for submitting the "Intent to Respond" form is end of business day of date listed in the RFP schedule.

Signature of authorized representative: \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_