



REQUEST FOR PROPOSALS

HOURLY IMPACT OF ENERGY EFFICIENCY EVALUATION PILOT

DATE ISSUED: JUNE 4, 2020

RESPONDENT QUESTIONS DUE: JUNE 15, 2020 AT 4:30 PM EDT

RESPONSES TO QUESTIONS: JUNE 19, 2020

RESPONDENT PROPOSALS DUE: JULY 3, 2020 AT 4:30 PM EDT

Contact:
Philip Picotte, Utilities Analyst
Vermont Department of Public Service
Efficiency and Energy Resources Division
112 State Street
Montpelier, VT 05620-2601
Phone: (802) 828-5872
Email: philip.picotte@vermont.gov

INTRODUCTION

The Vermont Department of Public Service (“PSD”) is housed within the executive branch of Vermont state government and is charged with representing the public interest in energy, telecommunications, water, and wastewater utility matters. The mission of the PSD is to serve all citizens of Vermont through public advocacy, planning, programs, and other actions that meet the public's need for least cost, environmentally sound, efficient, reliable, secure, sustainable, and safe energy, telecommunications, and regulated utility systems in the state for the short and long term.

PSD works to advance all Vermonters' quality of life, economy and security through implementation of our statewide energy and telecommunications goals, using sound statewide energy and telecommunications planning, strong public advocacy of the public good, and through strong consumer protection advocacy for individuals.

Pilot Project Summary

The Vermont PSD seeks a Contractor or team of Contractors to develop a pilot project for energy efficiency evaluation using advanced measurement and verification (M&V) techniques. The primary objective is to estimate the hourly savings of residential and commercial electric efficiency measures to inform the Department’s understanding of the time-value of efficiency. Advanced M&V also offers the promise of lowering evaluation costs in the long run and offer faster feedback on efficiency program design. While the pilot advances an understanding of electric efficiency only, the project’s lessons are relevant to regulators and policymakers seeking insights into the connection between energy efficiency, renewable generation, electrification, and storage.

The pilot concept offers several potential beneficial outcomes, mainly an understanding of whether and how Advanced M&V can provide:

- Greater insight and granularity into the hourly impact of efficiency savings that can facilitate rate design and efficiency programs targeted to specific customers by load-shape, weather-driven usage, geography, or other factors;
- Greater confidence in savings to support an Energy Savings Guarantee product under development for commercial customers;
- Faster feedback on program energy-saving performance;
- Reduction in ratepayer funds needed to evaluate programs in the future; and
- Information that can be used to support improved integration of efficiency savings into ISO-NE markets.

Efficiency Vermont (EVT), which serves as one of the state’s three Energy Efficiency Utilities (EEUs), provides energy efficiency services for electricity and unregulated fuels for most of Vermont. EVT is operated by Vermont Energy Investment Corporation, a private, independent, non-profit organization. EVT programs have mandatory M&V on their efficiency resource

acquisition activity and on their demand reduction claims as part of ISO New England’s Forward Capacity Market.¹ Such M&V is assigned by the Public Utility Commission to the Department.

This year, EVT expects to conduct a separate pilot using IPMVP Option C (Whole Building Measurement) to test the feasibility of augmenting or supplementing site metering efforts. The Contractor selected under this RFP will review EVT’s efforts and be expected to provide feedback, although the EVT process will be separate and different in purpose and scale from PSD’s pilot. Similarly, the Contractor will be expected to work with EVT and build sufficient time into the schedule to allow for EVT (and potentially other stakeholder) review and comment on the work.

Prospective bidders must have extensive experience and demonstrated abilities in advanced M&V techniques (also called “M&V 2.0”), including past work using Advanced Metering Infrastructure (AMI) data managed by a third party. Bidders should provide a brief (1-2 page) issue summary or literature review demonstrating familiarity with measuring and making use of hourly efficiency savings data. The Department is especially interested in open-source platforms, although non-open-source approaches will be considered. Ongoing costs associated with non-open-source approaches should be included in bidders’ proposals; this could include licensing fees or other costs related to future use of the methods.

Bidders should have expertise using Advanced M&V methods that meet the International Performance Measurement and Verification Protocol (IPMVP) and work that happens after—or concurrently with—traditional program M&V. Bidders must demonstrate the ability to produce draft and final deliverables on time and be willing to work closely with the Department, EVT, and other stakeholders as needed.

PURPOSE AND MANAGEMENT STRUCTURE

Purpose and Background

This pilot will review AMI data and efficiency measure installation data to determine if Advanced M&V methods can (1) provide more temporal granularity for electricity savings, and (2) determine consistency between this approach and traditional M&V methods. Additional objectives, as mentioned above, include gaining a better understanding of how Advanced M&V could optimize program operations as described in the areas above.

Vermont has both a longstanding commitment to cost-effective energy efficiency and high prevalence of AMI meters. Vermont ranks among top states for both energy efficiency (ACEEE’s 2019 State Scorecard) and for the widespread adoption of AMI meters (EIA, 2017).

EVT delivers electric energy efficiency for the state, except in Burlington Electric Department (BED) territory, where BED delivers energy efficiency services to its customers. In addition to electric energy efficiency, EVT and BED both deliver energy efficiency services for unregulated delivered thermal heating and process fuels (mainly heating oil and propane). VGS delivers

¹ See ISO New England’s “Manual for Measurement and Verification of On-Peak Demand Resources and Seasonal Peak Demand Resources” for details about passive demand resources M&V related to the Forward Capacity Market.

regulated natural gas energy efficiency services in its service footprint which overlaps with both EVT and BED's service territories. EVT, BED, and VGS each currently operate pursuant to a twelve-year rolling Order of Appointment under the jurisdiction of the Public Utility Commission (PUC or Commission).

AMI data is collected and managed by electric distribution utilities (DUs). This project will focus on Green Mountain Power residential and commercial customers due to hourly data availability. EVT maintains a data repository with AMI data for Green Mountain Power customers with 15-minute intervals. The Contractor or Contractors will work with EVT to gain access to necessary data for the analysis; this includes AMI data and efficiency measure installation details.

Management Structure

The PSD will have a contract manager that will lead the management of the contract execution. The PSD contract manager will be the point person for all contract monitoring, communication, and delivered work product associated with the scope of work, as well as assuring quality work product, timeliness, and review and approval of invoices. Monitoring will occur on an ongoing basis as part of bi-weekly meetings with the contractor's project manager. The PSD contract manager will monitor the contractor's activities and performance in order to detect and prevent problems, and to ensure the contract terms are met and State expenditures are appropriate, effective, and efficient.

STATEMENT OF WORK

The major areas of focus for the scope of work shall include the following tasks:

- Task 1 – Kick-off meeting and revised work plan
- Task 2 – Data access and preparation
- Task 3 – Analysis of hourly impact of efficiency
- Task 4 – Comparison of advanced and traditional M&V practices
- Task 5 – Lessons for program operations
- Task 6 – Reporting
- Task 7 – General administration and management

Respondents should propose a work plan that addresses each of the seven tasks.

1. TASK 1: KICK-OFF MEETING AND REVISED WORK PLAN

Respondents should propose a plan and process for kicking-off the project and submitting a revised work plan to the Department including the guidelines below. This meeting should occur in person, as soon as possible following the selection of a winning Contractor and execution of a contract.

- Meet with PSD staff, EVT and any other stakeholders as determined by the PSD to ensure there is a common understanding of the project’s needs and the proposed work efforts and products. Prior to the kick-off meeting, review past evaluation efforts as directed by PSD.
- Identify the level of EVT and other Vermont utility assistance expected to be needed to effectively carry out the scope of work as well as meet the timelines associated with this work.
- Following the kick-off meeting, submit a revised work plan documenting the common understandings between the Contractors and the PSD (and stakeholders). This plan should represent the detailed schedule for completion of interim products (e.g. any preliminary results) and final report products (e.g. the draft and final report, and final project databases). The revised work plan should be based on a 3- to 6-month project timeline, from the kick-off meeting to the submission of final products. All work should be expected to be completed by December 15, 2020.

TASK 2: DATA ACCESS AND PREPARATION

The Contractor will work with Efficiency Vermont to gain access to appropriate meter and project data, and prepare all data for analysis. The Department and EVT will be prepared to provide input on a variety of values and assumptions needed for the pilot. Respondents should identify data needs in their proposal in sufficient detail to quantify expected demands on EVT in line with Task 1.

The Contractor must comply with customer confidentiality and data security practices identified by the Department and EVT. Confidential customer information must be kept confidential by the selected Contractor and its agents, employees, subcontractors, and representatives in compliance with all applicable federal and state laws. The PSD can additional information about EVT practices upon request.

The Contractor will use custom savings estimates prepared by EVT as well as values from the Vermont Technical Reference Manual² (TRM) regarding measure characterizations (measure savings and lifetimes) as well as relevant Vermont specific EM&V results.

Respondents should describe any platform or software-as-a-service, including expected access for the Department and EVT in the near-term and long-term. Any fees, including ongoing fees or license requirements, should also be described.

TASK 3: ANALYSIS OF HOURLY IMPACT OF EFFICIENCY

The Contractor will plan and implement an analysis to estimate the hourly energy savings of electric efficiency measures, based on meter interval data. The Contractor will estimate the amount of the energy demand reduction in relation to historical coincident utility, state, and

² The winning bidder will be provided access to the most recent version of the Vermont Technical Reference Manual.

regional electricity grid peaks. (This information can be provided by PSD.) This includes the demand reduction of savings during monthly and annual peak events. The analysis must provide describe level of confidence in energy savings and capacity reduction.

The analysis should focus on measures implemented in 2017 and 2018; the Contractor may choose to include additional years in the analysis (to the extent additional data is available). The Contractor should conduct the analysis at the project level, for technologies across project, and—to the extent practicable—at the sector or program level for those programs suitable for this type of data analysis. In their proposal, the Contractor should address the expected level of confidence in sector or program findings, and propose the measures, projects, programs, and sectors (i.e. residential, commercial, low-income etc.) that will be reviewed. **At a minimum, each proposal should budget for the residential and commercial measures listed in Appendix 1 at the end of this document.** The list reflects measures that are common or otherwise important, such as cold-climate heat pumps. Respondents are encouraged to suggest other measures or categories, including but not limited to the non-required priority measures listed in Appendix 1, with costs for optional measure analysis detailed in a separate budget from the analysis of required measures.

The Contractor should describe how their methods will meet “IPMPV Option C: Whole Facility” approach to measuring savings. The Contractor may choose whether or not to use entirely open-source methods, but respondents must provide a detailed methodology of screening and qualifying projects, data processing, aggregation, uncertainty qualification, comparison group development, and calculating avoided energy use.

The Department recognizes that CalTRACK methods are frequently cited as a way to standardize meter analysis, but implementation of these methods can still lead to variation in results. Regardless of which methods are chosen, respondents should explain implications for replicability and transparency.

Respondents should describe approaches and specific methods to assess “time value” of the efficiency savings on an hourly basis for monthly and annual peak hours, including resulting demand reduction induced price effects (DRIPE).

TASK 4: COMPARISON OF TRADITIONAL AND ADVANCED M&V PRACTICES

The Contractor will compare the results of their analysis conducted for Task 3 with the findings of existing M&V work conducted for Efficiency Vermont programs using traditional methods. The findings will address results the project and sector level, but the Department is also interested in applicability for the program level.

Respondents should describe how they will compare advanced and traditional M&V methods, especially regarding uncertainty and precision. Ideally, the comparison of advanced and traditional M&V methods should include an uncertainty analysis or other assessment of unexplained variation. If supported through the uncertainty analysis, the Contractor should describe the ability for advanced M&V to increase confidence in savings in the context of a

savings guarantee. If a savings guarantee is not supported, the Contractor should recommend how advanced M&V methods should be improved to support savings guarantee underwriting.

During 2020, and separate in scope from this analysis, EVT plans to undertake an effort focused on comparing advanced M&V methods to traditional M&V methods (in short, using IPMVP Option C and Option B methods). The Contractor will review the methods and findings of EVT's analysis. The review will mainly address the use of EVT's process related to ISO-NE FCM.

TASK 5: LESSONS FOR PROGRAM OPERATIONS

The Contractor will identify if and how advanced M&V can offer better and/or faster feedback to program administrators, whether through customer targeting, implementation, customer operation, equipment choice, or post-installation commissioning. The Contractor will quantify evaluation costs for both approaches.

The Contractor will address whether the methods can provide enough confidence in savings to support an Energy Savings Guarantee product for commercial customers, and what steps are needed to use advanced M&V as part of the product. The Contractor will also determine whether the pilot concept will lead to a reduction in ratepayer funds to evaluate programs, and how the concept can support improve integration of efficiency savings into ISO-NE markets.

TASK 6: REPORTING

Respondents should detail proposals for reporting including interim, draft final, and final reports. Please note that EVT will be, and other stakeholders may be, provided an opportunity to review and comment on the draft report.

TASK 7: GENERAL ADMINISTRATION AND MANAGEMENT

Respondents should include in their proposal a project manager that will be the lead in terms of communication with the Department. Management responsibilities should include regular, bi-weekly (at a minimum) project updates with the Department's project manager, in which the Contractor and the Department will have a conference telephone call in which the Contractor will provide a project progress review.

In addition, the Contractor should include conducting regular check-in meetings with EVT, as necessary, throughout the course of the contract.

PROJECT TIMELINE

Respondents should propose a detailed timeline for completing the project within 3-6 months after the contract is executed. Respondents should plan for the state contracting process to take 6-8 weeks after bid selection. The project timeline should start with a kick-off meeting and end

with delivery of final products on the schedule indicating task priorities and work product final deliverable schedule in the table below.

Key Deliverable Tasks	Suggested Deliverable Dates After Contract Execution
TASK 1: Kick-off Meeting and Revised Workplan	Kickoff Meeting – 3 Weeks Revised Workplan – 4 Weeks
TASK 2: Data Access and Preparation	Data Access Agreement w/ EVT – 2.5 months
TASK 3: Analysis of Time Value of Efficiency	Initial Draft – 3 months Second Draft – 4 months
TASK 4: Comparison of Traditional and Advanced M&V Practices	Initial Draft – 3.5 months Final – 4 months
TASK 5: Lessons for Program Optimization	Initial Draft – 4 months Final – 5 months

The project should be scheduled to be completed no later than December 15, 2020.

PRODUCTS FROM PROJECT

Reports and all supporting data shall be submitted to the Department in a mutually acceptable, commonly usable electronic format, along with a documented data dictionary describing the database contents. Respondents proposals should discuss any other suggested database to be used and the data quality procedures planned.

BUDGETS

Respondents should clearly outline proposed budgets by task and for the total project. This includes separating required and optional measure categories specified under Task 3.

Hourly rates should be clearly identified and should remain the same for the duration of the contract. For reimbursable travel expenses (such as mileage, airfare, lodging, meals) the bidder should include costs as part of their fixed or hourly rates. In addition, the total cost of reimbursable travel expenses should be separately stated.

The total budget for this effort is between **\$80,000 and \$100,000**. The Department reserves the right to award less than this amount or to forgo making an award altogether (see Terms and Conditions). Budgets of up to \$150,000 may be considered if sufficient and detailed justification is provided by the respondent.

RFP RESPONSE REQUIREMENTS

All questions regarding this RFP should be directed to Philip Picotte, PSD Division of Efficiency and Energy Resources, in writing no later than close of business (4:30PM EDT) on **June 15**,

2020, at the contact information provided below. Responses to questions will be provided by close of business on **June 19, 2020**.

Each proposal submission must include two hard copies with original signatures and one electronic copy (via email preferred). Proposals should be addressed to:

Philip Picotte, Utilities Analyst
Vermont Public Service Department
Efficiency and Energy Resources Division
112 State Street
Montpelier, VT 05620-2601
Phone: (802) 828-5872
Fax: (802) 828-2342
Email: philip.picotte@vermont.gov

Both hard copies and electronic copies of proposals are due to the Department on **July 3, 2020 at 4:30PM EDT**. The Contractor selection process will be conducted by a Proposal Review Team comprised of Department staff and other stakeholders as the Department deems prudent. The Team will follow all rules and procedures required under the State of Vermont's acquisition guidelines. Once a Contractor has been selected, the Department will notify all respondents of their status. Successful bidders must be available to begin work immediately following execution of a contract.

The proposal should present a clear understanding of the issues to be addressed and a description of how the bidders proposed approach will accomplish the evaluation goals. The proposal should include the following sections:

1. Introduction
2. Understanding of the research goals and associated issues
3. Overview of the proposed approach
4. Detailed task descriptions
5. Description suggested database to be used and the data quality procedures planned
6. Task and total project budget that includes a listing of all staff assigned to the project, including project manager, and their time allocations and billing rates
7. Timeline
8. Qualifications of firm(s), including management and staff structure
9. Qualification of individuals
10. Descriptions of similar projects
11. References, including a short description of the work performed for such references
12. Sample report from prime contractor
13. Certificate of insurance

Bidder Confidentiality and Access to Public Records:

All bidders are hereby notified that all responses and other information disclosed in connection with this RFP become the property of the State and, once the resulting Contract is finalized, may be subject to disclosure under the State's Access to Public Records Law, 1 V.S.A. § 315 et seq.

Accordingly, bidders are instructed to identify any material included in the response that is considered by the bidder to be proprietary or otherwise exempt from public disclosure in the event of a Public Records request, pursuant to 1 V.S.A. § 317(c). In such instances the bidder must include a written explanation for each marked section that would support a reasonable claim of exemption, such as, for example, a description of the proprietary nature of the information and the harm that would occur should the material be disclosed. Additionally, if such material is included in the bid to this RFP the bidder must include a redacted copy of its response to this RFP. Redactions must be limited so that the reviewer may understand the nature of the information being withheld. It is typically inappropriate to redact entire pages, or to redact the titles/captions of tables and figures. Under no circumstances can the entire response or price information be marked confidential.

GENERAL REQUIREMENTS

The Contractor hired must meet the following General Requirements:

1. Contractor(s) must have extensive experience and demonstrated abilities in all relevant aspects of energy efficiency program measurement, verification and evaluation. Contractors should possess a good knowledge of energy efficiency program design and implementation.
2. Contractor(s) must be fully conversant with current energy efficiency information technology systems, DSM tracking systems, and applications.
3. Contractor(s) should not be currently employed by EVT, BED, or a related entity to both, and should agree not to undertake such employment during the term of this contract. This condition may be waived if requested.
4. Contractor(s) must be available to begin work immediately after the contract is awarded and commit to work completion as soon as possible.
5. A lead contractor and lead contact person must be identified in joint proposals.
6. Proposals should clearly identify any Vermont-based firms that may be included as sub-contractors.

PERFORMANCE

Contractor must agree to the following performance measure language:

1. Relationships – work well with PSD staff and other stakeholders.
2. Quality – written work (including data analysis and research) is well-written, clear and thorough and delivered on a timely basis.
3. Timeliness – submits all work in advance of deadlines to allow adequate time for PSD review and production.

In the event the quality of work described above were to deteriorate in any way, a request would be made that the work be resubmitted immediately at no additional charge to the Department. If

there were not an immediate improvement in the overall quality of work, the Contractor would no longer be retained by the Department.

SELECTION CRITERIA

The PSD will evaluate the respondents' proposals according to the criteria listed below. This list is not necessarily provided in order of relative importance.

1. Responsiveness/thoroughness and practicality of the proposed approach in meeting the research objectives and for completing the tasks described in this RFP.
2. Experience of *key personnel* in successfully completing similar research and ability to provide on-time, in-budget research.
3. Experience of *the contractor* in successfully completing similar research and ability to provide on-time, in-budget research.
4. The proposal presentation with respects to the following representations / discussions:
 - Clear understanding of study requirements
 - Technical expertise to conduct the research
 - Ability to provide high-quality written analysis and reports
 - Quantity and quality of work relative to specified budget
5. Past performance of the respondent and any proposed subcontractors.
6. Quality and completeness of the proposal (in terms of coverage, organization, graphics, grammar, spelling, etc.). The quality of the proposal (along with the sample report) will be considered an indication of the likely appearance of deliverables from the respondent.
7. Price, including consideration of ongoing fees or costs incurred after the project concludes (i.e., related to non-open-source methods or tools).

TERMS AND CONDITIONS

1. Respondents must provide an hourly rate for various personnel to be assigned to each task identified in the proposal. While actual hours by task cannot be known with precision in advance, a best estimate should be provided with the proposal. A “not to exceed” budget figure will be established in the Terms and Conditions of the contract with the successful bidder.
2. Ownership of all work products will rest with the Department.
3. Any work products will be delivered to the Department upon termination of the project.
4. Contractors(s) must agree to enter a confidentiality agreement to protect certain customer specific information from public disclosure, as necessary.
5. The PSD reserves the right to amend or cancel this RFP at any time if the best interest of the State requires such action.
6. The PSD reserves the right to reject any or all proposals and to waive informalities and minor irregularities in proposals received and to accept any portion of a proposal if deemed in the best interest of the State.
7. The PSD reserves the right to accept or reject any and all bids, in whole or in part, with or without cause in the best interest of the State and to obtain clarification or additional information.

8. The PSD reserves the right to to make purchases outside of the awarded Contracts where it is deemed in the best interest of the State.
9. News releases pertaining to this RFP, contract award, or the Project shall NOT be made without prior written approval from the PSD.
10. Selection of the winning bidder will be made based on the sole opinion of the PSD that the proposal submitted will be the most advantageous for the State.
11. The PSD reserves the right to make a selection without further discussion of proposals received. Therefore, it is important that each proposal be submitted in the most complete and accurate manner possible.
12. The PSD reserves the right to cancel any contract resulting from this RFP, for cause, as will be defined in the Terms and Conditions of the final contract.
13. Contractor agrees to the terms and conditions of Attachment C and D, which outline the Standard State Provisions for Contracts and Grants. Any requested deviations from these Attachments must be presented in the response to this RFP. The PSD and the State reserve the right to deny any such request.

The PSD assumes no liability in any fashion with respect to this RFP or any matters related thereto. All prospective service providers and their assigns or successors, by their participation in the RFP process, shall indemnify, save and hold the PSD and its employees and agents free and harmless from all suits, causes of action, debts, rights, judgments, claims, demands, accounts, damages, costs, losses and expenses of whatsoever kind in law or equity, known and unknown, foreseen and unforeseen, arising from or out of this RFP and/or any subsequent acts related thereto, including but not limited to the recommendation of a service provider and any action brought by an unsuccessful prospective service provider.

It is imperative that Contractor(s) reveal any connections they or any sub-contractors have to projects included for verification. In general Contractors will not provide analysis for projects on which they are or were involved in developing engineering analysis related to project savings estimates.

As data handled by the selected Contractor(s) is potentially sensitive in nature, the Contractor will need to sign and abide by a confidentiality agreement provided by the PSD.

**ATTACHMENT C: STANDARD STATE PROVISIONS
FOR CONTRACTS AND GRANTS
REVISED DECEMBER 15, 2017**

1. Definitions: For purposes of this Attachment, “Party” shall mean the Contractor, Grantee or Subrecipient, with whom the State of Vermont is executing this Agreement and consistent with the form of the Agreement. “Agreement” shall mean the specific contract or grant to which this form is attached.

2. Entire Agreement: This Agreement, whether in the form of a contract, State-funded grant, or Federally-funded grant, represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.

3. Governing Law, Jurisdiction and Venue; No Waiver of Jury Trial: This Agreement will be governed by the laws of the State of Vermont. Any action or proceeding brought by either the State or the Party in connection with this Agreement shall be brought and enforced in the Superior Court of the State of Vermont, Civil Division, Washington Unit. The Party irrevocably submits to the jurisdiction of this court for any action or proceeding regarding this Agreement. The Party agrees that it must first exhaust any applicable administrative remedies with respect to any cause of action that it may have against the State with regard to its performance under this Agreement. Party agrees that the State shall not be required to submit to binding arbitration or waive its right to a jury trial.

4. Sovereign Immunity: The State reserves all immunities, defenses, rights or actions arising out of the State’s sovereign status or under the Eleventh Amendment to the United States Constitution. No waiver of the State’s immunities, defenses, rights or actions shall be implied or otherwise deemed to exist by reason of the State’s entry into this Agreement.

5. No Employee Benefits For Party: The Party understands that the State will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation or sick leave, workers compensation or other benefits or services available to State employees, nor will the State withhold any state or Federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Agreement. The Party understands that all tax returns required by the Internal Revenue Code and the State of Vermont, including but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Party, and information as to Agreement income will be provided by the State of Vermont to the Internal Revenue Service and the Vermont Department of Taxes.

6. Independence: The Party will act in an independent capacity and not as officers or employees of the State.

7. Defense and Indemnity: The Party shall defend the State and its officers and employees against all third party claims or suits arising in whole or in part from any act or omission of the Party or of any agent of the Party in connection with the performance of this Agreement. The State shall notify the Party in the event of any such claim or suit, and the Party shall immediately retain counsel and otherwise provide a complete defense against the entire claim or suit. The State retains the right to participate at its own expense in the defense of any claim. The State shall have the right to approve all proposed settlements of such claims or suits.

After a final judgment or settlement, the Party may request recoupment of specific defense costs and may file suit in Washington Superior Court requesting recoupment. The Party shall be entitled to recoup costs only upon a showing that such costs were entirely unrelated to the defense of any claim arising from an act or omission of the Party in connection with the performance of this Agreement.

The Party shall indemnify the State and its officers and employees if the State, its officers or employees become legally obligated to pay any damages or losses arising from any act or omission of the Party or an agent of the Party in connection with the performance of this Agreement.

Notwithstanding any contrary language anywhere, in no event shall the terms of this Agreement or any document furnished by the Party in connection with its performance under this Agreement obligate the State to (1) defend or indemnify the Party or any third party, or (2) otherwise be liable for the expenses or reimbursement, including attorneys' fees, collection costs or other costs of the Party or any third party.

8. Insurance: Before commencing work on this Agreement the Party must provide certificates of insurance to show that the following minimum coverages are in effect. It is the responsibility of the Party to maintain current certificates of insurance on file with the State through the term of this Agreement. No warranty is made that the coverages and limits listed herein are adequate to cover and protect the interests of the Party for the Party's operations. These are solely minimums that have been established to protect the interests of the State.

Workers Compensation: With respect to all operations performed, the Party shall carry workers' compensation insurance in accordance with the laws of the State of Vermont. Vermont will accept an out-of-state employer's workers' compensation coverage while operating in Vermont provided that the insurance carrier is licensed to write insurance in Vermont and an amendatory endorsement is added to the policy adding Vermont for coverage purposes. Otherwise, the party shall secure a Vermont workers' compensation policy, if necessary to comply with Vermont law.

General Liability and Property Damage: With respect to all operations performed under this Agreement, the Party shall carry general liability insurance having all major divisions of coverage including, but not limited to:

Premises - Operations

Products and Completed Operations

Personal Injury Liability

Contractual Liability

The policy shall be on an occurrence form and limits shall not be less than:

\$1,000,000 Each Occurrence

\$2,000,000 General Aggregate

\$1,000,000 Products/Completed Operations Aggregate

\$1,000,000 Personal & Advertising Injury

Automotive Liability: The Party shall carry automotive liability insurance covering all motor vehicles, including hired and non-owned coverage, used in connection with the Agreement. Limits of coverage shall not be less than \$500,000 combined single limit. If performance of this Agreement involves construction, or the transport of persons or hazardous materials, limits of coverage shall not be less than \$1,000,000 combined single limit.

Additional Insured. The General Liability and Property Damage coverages required for performance of this Agreement shall include the State of Vermont and its agencies, departments, officers and employees as Additional Insureds. If performance of this Agreement involves construction, or the transport of persons or hazardous materials, then the required Automotive Liability coverage shall include the State of Vermont and its agencies, departments, officers and employees as Additional Insureds. Coverage shall be primary and non-contributory with any other insurance and self-insurance.

Notice of Cancellation or Change. There shall be no cancellation, change, potential exhaustion of aggregate limits or non-renewal of insurance coverage(s) without thirty (30) days written prior written notice to the State.

9. Reliance by the State on Representations: All payments by the State under this Agreement will be made in reliance upon the accuracy of all representations made by the Party in accordance with this Agreement, including but not limited to bills, invoices, progress reports and other proofs of work.

10. False Claims Act: The Party acknowledges that it is subject to the Vermont False Claims Act as set forth in 32 V.S.A. § 630 *et seq.* If the Party violates the Vermont False Claims Act it shall be liable to the State for civil penalties, treble damages and the costs of the investigation and prosecution of such violation, including attorney's fees, except as the same may be reduced by a court of competent jurisdiction. The Party's liability to the State under the False Claims Act shall not be limited notwithstanding any agreement of the State to otherwise limit Party's liability.

11. Whistleblower Protections: The Party shall not discriminate or retaliate against one of its employees or agents for disclosing information concerning a violation of law, fraud, waste, abuse of authority or acts threatening health or safety, including but not limited to allegations concerning the False Claims Act. Further, the Party shall not require such employees or agents to forego monetary awards as a result of such disclosures, nor should they be required to report misconduct to the Party or its agents prior to reporting to any governmental entity and/or the public.

12. Location of State Data: No State data received, obtained, or generated by the Party in connection with performance under this Agreement shall be processed, transmitted, stored, or transferred by any means outside the continental United States, except with the express written permission of the State.

13. Records Available for Audit: The Party shall maintain all records pertaining to performance under this agreement. "Records" means any written or recorded information, regardless of physical form or characteristics, which is produced or acquired by the Party in the performance of this agreement. Records produced or acquired in a machine readable electronic format shall be maintained in that format. The records described shall be made available at reasonable times during the period of the Agreement and for three years thereafter or for any period required by law for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved.

14. Fair Employment Practices and Americans with Disabilities Act: Party agrees to comply with the requirement of 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Party shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990, as amended, that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Party under this Agreement.

15. Set Off: The State may set off any sums which the Party owes the State against any sums due the Party under this Agreement; provided, however, that any set off of amounts due the State of Vermont as taxes shall be in accordance with the procedures more specifically provided hereinafter.

16. Taxes Due to the State:

- A. Party understands and acknowledges responsibility, if applicable, for compliance with State tax laws, including income tax withholding for employees performing services within the State, payment of use tax on property used within the State, corporate and/or personal income tax on income earned within the State.
- B. Party certifies under the pains and penalties of perjury that, as of the date this Agreement is signed, the Party is in good standing with respect to, or in full compliance with, a plan to pay any and all taxes due the State of Vermont.

- C. Party understands that final payment under this Agreement may be withheld if the Commissioner of Taxes determines that the Party is not in good standing with respect to or in full compliance with a plan to pay any and all taxes due to the State of Vermont.
- D. Party also understands the State may set off taxes (and related penalties, interest and fees) due to the State of Vermont, but only if the Party has failed to make an appeal within the time allowed by law, or an appeal has been taken and finally determined and the Party has no further legal recourse to contest the amounts due.

17. Taxation of Purchases: All State purchases must be invoiced tax free. An exemption certificate will be furnished upon request with respect to otherwise taxable items.

18. Child Support: (Only applicable if the Party is a natural person, not a corporation or partnership.) Party states that, as of the date this Agreement is signed, he/she:

- A. is not under any obligation to pay child support; or
- B. is under such an obligation and is in good standing with respect to that obligation; or
- C. has agreed to a payment plan with the Vermont Office of Child Support Services and is in full compliance with that plan.

Party makes this statement with regard to support owed to any and all children residing in Vermont. In addition, if the Party is a resident of Vermont, Party makes this statement with regard to support owed to any and all children residing in any other state or territory of the United States.

19. Sub-Agreements: Party shall not assign, subcontract or subgrant the performance of this Agreement or any portion thereof to any other Party without the prior written approval of the State. Party shall be responsible and liable to the State for all acts or omissions of subcontractors and any other person performing work under this Agreement pursuant to an agreement with Party or any subcontractor.

In the case this Agreement is a contract with a total cost in excess of \$250,000, the Party shall provide to the State a list of all proposed subcontractors and subcontractors' subcontractors, together with the identity of those subcontractors' workers compensation insurance providers, and additional required or requested information, as applicable, in accordance with Section 32 of The Vermont Recovery and Reinvestment Act of 2009 (Act No. 54).

Party shall include the following provisions of this Attachment C in all subcontracts for work performed solely for the State of Vermont and subcontracts for work performed in the State of Vermont: Section 10 ("False Claims Act"); Section 11 ("Whistleblower Protections"); Section 12 ("Location of State Data"); Section 14 ("Fair Employment Practices and Americans with Disabilities Act"); Section 16 ("Taxes Due the State"); Section 18 ("Child Support"); Section 20 ("No Gifts or Gratuities"); Section 22 ("Certification Regarding Debarment"); Section 30 ("State Facilities"); and Section 32.A ("Certification Regarding Use of State Funds").

20. No Gifts or Gratuities: Party shall not give title or possession of anything of substantial value (including property, currency, travel and/or education programs) to any officer or employee of the State during the term of this Agreement.

21. Copies: Party shall use reasonable best efforts to ensure that all written reports prepared under this Agreement are printed using both sides of the paper.

22. Certification Regarding Debarment: Party certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, neither Party nor Party's principals (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible or excluded from participation in Federal programs, or programs supported in whole or in part by Federal funds.

Party further certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, Party is not presently debarred, suspended, nor named on the State's debarment list at: <http://bgs.vermont.gov/purchasing/debarment>

23. Conflict of Interest: Party shall fully disclose, in writing, any conflicts of interest or potential conflicts of interest.

24. Confidentiality: Party acknowledges and agrees that this Agreement and any and all information obtained by the State from the Party in connection with this Agreement are subject to the State of Vermont Access to Public Records Act, 1 V.S.A. § 315 et seq.

25. Force Majeure: Neither the State nor the Party shall be liable to the other for any failure or delay of performance of any obligations under this Agreement to the extent such failure or delay shall have been wholly or principally caused by acts or events beyond its reasonable control rendering performance illegal or impossible (excluding strikes or lock-outs) ("Force Majeure"). Where Force Majeure is asserted, the nonperforming party must prove that it made all reasonable efforts to remove, eliminate or minimize such cause of delay or damages, diligently pursued performance of its obligations under this Agreement, substantially fulfilled all non-excused obligations, and timely notified the other party of the likelihood or actual occurrence of an event described in this paragraph.

26. Marketing: Party shall not refer to the State in any publicity materials, information pamphlets, press releases, research reports, advertising, sales promotions, trade shows, or marketing materials or similar communications to third parties except with the prior written consent of the State.

27. Termination:

A. Non-Appropriation: If this Agreement extends into more than one fiscal year of the State (July 1 to June 30), and if appropriations are insufficient to support this Agreement, the State may cancel at the end of the fiscal year, or otherwise upon the expiration of existing appropriation authority. In the case that this Agreement is a Grant that is funded in whole or in part by Federal funds, and in the event Federal funds become unavailable or reduced, the State may suspend or cancel this Grant immediately, and the State shall have no obligation to pay Subrecipient from State revenues.

B. Termination for Cause: Either party may terminate this Agreement if a party materially breaches its obligations under this Agreement, and such breach is not cured within thirty (30) days after delivery of the non-breaching party's notice or such longer time as the non-breaching party may specify in the notice.

C. Termination Assistance: Upon nearing the end of the final term or termination of this Agreement, without respect to cause, the Party shall take all reasonable and prudent measures to facilitate any transition required by the State. All State property, tangible and intangible, shall be returned to the State upon demand at no additional cost to the State in a format acceptable to the State.

28. Continuity of Performance: In the event of a dispute between the Party and the State, each party will continue to perform its obligations under this Agreement during the resolution of the dispute until this Agreement is terminated in accordance with its terms.

29. No Implied Waiver of Remedies: Either party's delay or failure to exercise any right, power or remedy under this Agreement shall not impair any such right, power or remedy, or be construed as a waiver of any such right, power or remedy. All waivers must be in writing.

30. State Facilities: If the State makes space available to the Party in any State facility during the term of this Agreement for purposes of the Party's performance under this Agreement, the Party shall only use the space in accordance with all policies and procedures governing access to and use of State facilities which shall be made available upon request. State facilities will be made available to Party on an "AS IS, WHERE IS" basis, with no warranties whatsoever.

31. Requirements Pertaining Only to Federal Grants and Subrecipient Agreements: If this Agreement is a grant that is funded in whole or in part by Federal funds:

A. Requirement to Have a Single Audit: The Subrecipient will complete the Subrecipient Annual Report annually within 45 days after its fiscal year end, informing the State of Vermont whether or not a Single Audit is required for the prior fiscal year. If a Single Audit is required, the Subrecipient will submit a copy of the audit report to the granting Party within 9 months. If a single audit is not required, only the Subrecipient Annual Report is required.

For fiscal years ending before December 25, 2015, a Single Audit is required if the subrecipient expends \$500,000 or more in Federal assistance during its fiscal year and must be conducted in accordance with OMB Circular A-133. For fiscal years ending on or after December 25, 2015, a Single Audit is required if the subrecipient expends \$750,000 or more in Federal assistance during its fiscal year and must be conducted in accordance with 2 CFR Chapter I, Chapter II, Part 200, Subpart F. The Subrecipient Annual Report is required to be submitted within 45 days, whether or not a Single Audit is required.

B. Internal Controls: In accordance with 2 CFR Part II, §200.303, the Party must establish and maintain effective internal control over the Federal award to provide reasonable assurance that the Party is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the award. These internal controls should be in compliance with guidance in "Standards for Internal Control in the Federal Government" issued by the Comptroller General of the United States and the "Internal Control Integrated Framework", issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

C. Mandatory Disclosures: In accordance with 2 CFR Part II, §200.113, Party must disclose, in a timely manner, in writing to the State, all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Failure to make required disclosures may result in the imposition of sanctions which may include disallowance of costs incurred, withholding of payments, termination of the Agreement, suspension/debarment, etc.

32. Requirements Pertaining Only to State-Funded Grants:

A. Certification Regarding Use of State Funds: If Party is an employer and this Agreement is a State-funded grant in excess of \$1,001, Party certifies that none of these State funds will be used to interfere with or restrain the exercise of Party's employee's rights with respect to unionization.

B. Good Standing Certification (Act 154 of 2016): If this Agreement is a State-funded grant, Party hereby represents: (i) that it has signed and provided to the State the form prescribed by the Secretary of Administration for purposes of certifying that it is in good standing (as provided in Section 13(a)(2) of Act 154) with the Agency of Natural Resources and the Agency of Agriculture, Food and Markets, or otherwise explaining the circumstances surrounding the inability to so certify, and (ii) that it will comply with the requirements stated therein.

ATTACHMENT D
Other Provisions

1. **Work Product Ownership.** Upon full payment by the State, all products of the Contractor's work, including outlines, reports, charts, sketches, drawings, art work, plans, photographs, specifications, estimates, computer programs, or similar documents, become the sole property of the State of Vermont and may not be copyrighted or resold by Contractor.
2. **Prior Approval/Review of Releases.** Any notices, information pamphlets, press releases, research reports, or similar other publications prepared and released in written or oral form by the Contractor under this contract shall be approved by the State prior to release.
3. **Ownership of Equipment.** Any equipment purchased or furnished by the State to Contractor under this contract is provided on a loan basis only and remains the property of the State.
4. **Confidential Information.** Contractor agrees to keep confidential all information produced or acquired by Contractor in connection with this Contract. Contractor will take reasonable measures as are necessary to restrict access to this information to employees or agents who must have the information on a "need to know" basis. The Contractor shall promptly notify the State of any third party request for this information so that the State may act to protect its confidentiality.

APPENDIX 1
Prescriptive Measures for Analysis
Version 1

Required Measures

Note: Annual measure count and savings information are included for context.

Customer Type	Measure	Count	Electric Savings (kWh)	Thermal Savings (MMBtu)
Commercial	LED Exterior Fixtures	3,215	1,704,937	-
Commercial	BLPM Circulator Pump	391	276,636	-
Commercial	Cold Climate Single-head Heat Pump	358	(38,174)	1,883
Residential	LED Screw Base Lamp	38,623	1,642,881	(10)
Residential	Cold Climate Single-head Heat Pump	2,911	(1,273,385)	22,403
Residential	Advanced Thermostat	1,751	99,495	5,514
Residential	Heat Pump Water Heater	1,309	1,606,341	96

Optional Priority Measures

Note: These are optional measures reflecting a range of measure types. Respondents are encouraged to recommend other electric efficiency measures relevant to the project goals.

Customer Type	Measure	Count	Electric Savings (kWh)	Thermal Savings (MMBtu)
Commercial	LED Recessed Lighting Fixture 2X4	7,659	947,069	(658)
Commercial	LED Agricultural Interior Fixtures	6,206	3,715,238	-
Commercial	Fixture-Mount Dual Occupancy & Daylight Sensor	1,107	84,017	(58)
Commercial	BLPM Circulator Pump	391	276,636	-
Commercial	Efficient Blower Fan	262	139,981	-
Commercial	Synchronous Motor Evaporator Fan	43	15,592	-
Commercial	Outdoor High Efficiency Condensing Unit	17	63,320	-
Residential	LED Indoor Fixture	5,487	320,932	-
Residential	BLPM Boiler Circ Motor - Res	2,302	201,425	-
Residential	Dehumidifier	598	135,867	-
Residential	ENERGY STAR Clothes Dryer	528	102,379	(11)
Residential	Energy Star Clothes Washer (CEE Tier 2)	513	71,154	274
Residential	CEE Tier 2 Refrigerator, Incremental Cost	233	20,468	-