



## **REQUEST FOR PROPOSALS**

### ***Evaluation of Residential Sector Energy Efficiency Programs Under the Green Mountain Power Energy Efficiency Fund***

**Date Issued: July 8, 2008**  
**Response Due By: July 29, 2008**

Vermont Department of Public Service  
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## Overview

Green Mountain Power Corporation (GMP), pursuant to Public Service Board (PSB or the Board) order in Docket 7213, has established an Energy Efficiency Fund (EEF) to invest in projects that deliver incremental, significant benefits to GMP ratepayers.<sup>1</sup> Under the EEF, GMP will invest \$3.7 million over five years in new residential program not currently offered by the state's primary efficiency administrator, Efficiency Vermont (EVT). This Request for Proposals (RFP) seeks a Contractor, or team of Contractors, to help plan and deliver evaluation services for the first two years of the five-year EEF program period.

For consideration under this solicitation, respondents are expected to have extensive experience and demonstrated capabilities in the design and implementation of energy efficiency evaluation. Proposals should demonstrate the Contractor's familiarity with research techniques, strategies, and principles related to residential sector study design, on-site data gathering, data analysis, statistical sampling design to address reliability, variance, and bias. With the state's particular interest in documenting the savings potential of *Blue Line* power use monitors, Contractor's should clearly explain their experience with the interpretation and analysis of metered data. Respondents should also demonstrate the ability to convey complex topics using a clear and concise writing style. On the basis of these factors – as well as the Selection Criterion stipulated below – one or more Contractors will be selected to perform the work described herein.

All proposals are due to the Department of Public Service (Department or DPS) on **July 29, 2008**. The contractor selection process will be conducted by a Proposal Review Team comprised of Department staff. The Team will follow all rules and procedures required under the State of Vermont's acquisition guidelines, and will make a decision within two weeks of the proposal due date. Once a Contractor or Contractor Team has been selected, DPS will notify all Respondents of their status. Successful Contractors or Contractor Teams must be available to begin work immediately following receipt of the award.

Total funding under this RFP is not to exceed **\$149,000**, although the Department reserves the right to award less than this amount or to forgo making an award altogether (see Terms and Conditions). All questions regarding this RFP should be directed to TJ Poor, DPS Energy Efficiency Division, at the contact information provided below. Each proposal submission must include four hard copies with original signatures and one electronic copy. Proposals should be addressed to:

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<sup>1</sup> The PSB approved the EEF as a mechanism to balance special ratemaking treatment established in Docket 6107 (2001), which provided that if GMP were acquired or sold, any shareholder windfall must be returned to ratepayers. GMP was purchased by Northern New England Energy Corporation in March 2007 (Docket 7213).

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## Program Descriptions, Evaluation Framework, and Research Objectives

Green Mountain Power Corporation (GMP), pursuant to Public Service Board (PSB or the Board) Docket 7213, has established an Energy Efficiency Fund (EEF) to invest in projects that deliver incremental, significant benefits to GMP ratepayers. The EEF will invest \$3.7 million in *new* Residential Energy Services (RES) programs that are not currently offered by EVT. These funds will be distributed over a 5-year program period for the following activities:

- Discounts on “Blue Line” in-home electric meters
- Home retrofits aimed at electricity savings, as well as increasing thermal and water efficiencies<sup>2</sup>
- School workshops to educate students and parents about compact fluorescent (CFL) lighting technology

To deliver these efficiency services, GMP has contracted with the Vermont Energy Investment Corporation (VEIC) to serve as program administrator. This arrangement specifies that GMP retains responsibility for meeting Board requirements. The DPS is tasked with carrying out robust, timely, and accurate evaluation and oversight. To this end, DPS, GMP, and other parties have jointly developed an Evaluation Plan that identifies: (a) high-level Research Objectives, (b) potential evaluation activities, and (c) an associated timeline. The Research Objectives seek to maximize ratepayer value, as follows:

- Identify and refine program evaluation approaches for the purpose of providing the Board with data sufficient to assess whether GMP has fulfilled its statutory obligations for returning value to ratepayers via energy savings (kWh), demand reductions (kW), and total resource benefits (TRB).

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<sup>2</sup> A separate initiative promoting time-of-replacement, high efficiency furnaces will be marketed through the home retrofit program. This cross-marketing represents an opportunity to capture significant thermal savings.

- Design and Implement research activities – including surveys, modeling, statistical analyses, etc – appropriate to the unique characteristics of GMP’s residential program offerings.
- Collect, analyze, and interpret these data with the goal of informing Board decisions regarding options for improving, refining, expanding, and/or terminating EEF programs.
- Develop a knowledge base for the purpose of informing Board and DPS decisions related to the overall design, structure, operation, delivery, and evaluation of EEF programs, as it relates both to GMP’s service territory and potential expansion of programs to the state as a whole.

Regarding timeframe, it should be noted that while GMP’s *program period* extends for five years, the *evaluation period* covered under this RFP is limited in scope to the period that ends two years from the date upon which a contract is signed (likely in August, 2010). However, specific deliverable dates will occur prior to the expiration of the two-year contract period. For example, research conducted for both *Blue Line* monitors and other programs must be completed by November 30<sup>th</sup>, 2009. For the purpose of budgeting, Contractors should allocate approximately two-thirds of the overall budget to *Blue Line*, with the remaining third split across the other two programs.

## Proposal Requirements

This RFP seeks proposals from individual Contractors or Contractor Teams aimed at evaluating programs delivered through GMP’s Energy Efficiency Fund. With the Research Objectives, budget, and evaluation timeframe specified above, the Department requires assistance identifying and refining evaluation research methods for the three residential-sector programs listed below. Contractor proposals under this RFP should therefore include a “first-cut” summary of their approach for carrying out the work. This summary is an opportunity for Respondents to demonstrate their expertise and unique qualifications – especially as it pertains to *Blue Line* power monitors – given the stated Research Objectives, budget, and timeline. It is also an opportunity for Contractors to convey a clear and logical writing style, as well as a thorough understanding of evaluation methods, related policy context, and unique considerations for Vermont markets. Key elements of the summary include an introduction that describes the overall approach/methodology, a description of individual research activities, a data management strategy, and a staffing plan necessary to conduct robust, accurate, and transparent evaluation of the three programs.

To assist Contractors with the development of proposals, brief descriptions of the EEF program are provided below. Each description includes pertinent background information and important considerations for developing a research approach. The evaluation information reflects the current thinking of DPS, GMP, and VEIC, but is subject to modification on the basis of new information or changing circumstances. Contractors should use this information as a starting point for their research summaries, but may suggest alternative methods and develop new approaches, as appropriate. It

should be noted that summaries developed for this RFP need not be “final” or comprehensive. Proposals should, however, outline the level of evaluation possible for residential programs given the funding available.

To maintain a degree of responsiveness and flexibility in administering the contract, the Department may identify – at a future date – other services or activities for inclusion under the scope of work. Such services and activities must be agreed upon by the parties and fall within the overall scope, budget, and timeframe described in the final contract language.

In preparation for developing proposals, Respondents may wish to consult the following background materials. For information on the policy context surrounding the GMP Energy Efficiency Fund, respondents are encouraged to review the following PSB Order of March 14, 2008: <http://www.state.vt.us/psb/orders/2008/files/7412fnl.pdf>.

It may also be useful to see the DPS and Board responsibilities regarding oversight and evaluation of the Energy Efficiency Utility (EEU): <http://www.state.vt.us/psb/EEU/OversightActivities/EEUOversightActivities.htm>.

Information concerning DPS evaluation priorities and activities, as well as GMP’s EEF program plan, can be provided upon request.

## **Program Descriptions**

As noted above, the Department requires assistance with the identification and refinement of EEF evaluation activities for the three residential sector programs, as follows:

### **1. *Blue Line* Power Use Monitors:**

Under the EEF, GMP will provide *Blue Line* power use monitors for up to 500 residential customers per year at reduced cost. This technology is intended to provide instantaneous feedback on energy consumption, allowing homeowners to identify and address opportunities for cost-effective savings. One previous impact evaluation conducted in Canada indicated that energy savings of 7-10% were readily achieved. Results in that study suggested that little to no prior customer education was required to identify savings opportunities in response to the real-time signal. However, the applicability of these results to Vermont markets can be questioned on the basis of in-state electricity prices and end use characteristics that differ greatly from the study conditions.

Research proposed under this RFP is aimed at identifying the kWh and kW impacts that can be expected from *Blue Line* technology, and secondarily how GMP can best deliver these programs to its customers. The *impact evaluation* will attempt to provide certainty on the savings level attributable to the *Blue Line* meters. The *process*

*evaluation* component is designed to assist program administrators, customers, and retailers in understanding how GMP's first-in-the-country pilot program can be optimized for energy savings and cost-effectiveness. The state's overall evaluation objective is to collect high-quality data for the purpose of informing future decisions about *Blue Line* technology, including whether further investments and program expansion are warranted, and if so, how programs are best delivered.

Regarding impact evaluation, the DPS has tentatively approved a preliminary Technical Reference Manual (TRM) value for kWh and kW savings. However, there is concern that this estimate may not accurately reflect the true savings value for the Vermont market. This is due in part to the fact that most state residents do not heat their homes with electricity, thereby removing a large potential source of savings. Contractor summaries should therefore propose one or more approaches for collecting and analyzing data for the purpose of identifying savings values with a high level of confidence. Methods should take into account the effects of weather, the influence of high electricity prices, and other factors, as appropriate. The impact evaluation should also attempt to identify whether *Blue Line* savings persist over time for most customers.

## **2. In-Home Retrofit:**

GMP's in-home retrofit program offers audits and select efficiency technologies free of charge for customers who agree to install recommended cost-effective measures. The initiative generally parallels the EEU's Home Performance with ENERGY STAR (HPwES) program but differs in that the incentive levels are higher than those offered by EVT. A separate initiative to promote time-of-replacement, high efficiency furnaces will be cross-marketed through the home retrofit program and provide an opportunity to capture significant thermal savings. Regarding program implementation, the provision of audits and installations will be conducted by certified local contractors. Because of the slow rate of growth of such qualified contractors, efforts will be made to market the program directly to this constituency and to provide training courses. The anticipated costs of delivering a comprehensive retrofit is expected to vary significantly (typically \$3,000-\$8,000), depending on the requirements of the individual home.

To evaluate program savings, the Evaluation Contractor should collect data on the quantity of participating installation contractors, the number of audits completed and projects resulting directly from the audits, and the average energy saved per project (including thermal savings). For complex projects (i.e., those for which TRM values are inadequate), a more sophisticated evaluation approach should be proposed in the Research Plan. Methods may include, but are not limited to: (a) verifying the size of the home and the levels of insulation/air leakage, and (b) conducting a "pre and post" billing analysis. Undertaking a more robust savings analysis may provide the additional benefit of assessing the accuracy of existing TRM values for the in-home retrofit program.

## **3. Energy Education in Schools:**

GMP estimates that 50 school workshops and associated events will be held in its service territory over the five-year period, at a cost of \$1,150 per event (this cost includes \$4 coupons for 200 lamps per event). The objective of this program is to offer a meaningful fundraising activity for schools that also serves to increase the acceptance of CFLs in this hard-to-reach market. From an evaluation perspective, the direct savings impact of the distributed bulbs is a relatively straightforward TRM calculation. The applicable savings value for this program has already been developed.

New evaluation work related to calculating the direct CFL savings may include identifying more accurate measurements for installation rates and for measure life. These quantities can be expected to differ somewhat from retail values on the basis of the unique program logic of the energy education services. In addition, an assessment of program spillover effects may be necessary to account for the educational nature of the program and the engagement of school children as marketers. Developing a better understanding these “net” effects may provide a more robust and complete picture of the full program impact.

## **Evaluation Budget, Proposal Schedule, and Deliverables**

Total funding under this RFP is not to exceed **\$149,000**, although the Department reserves the right to award less than this amount or to forgo making an award altogether, regardless of cause (see Terms and Conditions). Proposals are due to the Department of Public Service (Department or DPS) on **July 29, 2008**. The Department’s goal is to select the winning proposal and award a contract within two weeks of this date.

The Contractor selection process will be carried out by a Proposal Review Team comprised of Department staff. The Team will follow all appropriate procedures and requirements as required under the State of Vermont’s acquisition process. Once a proposal has been selected, DPS will immediately notify Respondents of their status. Successful Contractors or Contractor Teams must be available to begin work immediately following receipt of the award.

Regarding deliverables, it is required that all on-site, survey, and interview data collected under this project shall be entered into an electronic database and provided to DPS upon request with the goals of supporting additional analysis by DPS staff and enhancing future evaluation activities. Data quality procedures shall be applied to ensure that data entry is consistent, and that data is organized and submitted in a mutually acceptable, commonly usable electronic format. A transfer of the entire dataset shall occur upon termination of the contact, although any and all data must be provided to the Department upon request at any point during the project period.

One other Contractor deliverable is a report summarizing results from the *Blue Line* program, including: a description of the research approach, a summary of key

findings, and an interpretation of results. Similar reports may be required for other significant research conducted under this contract. All such reports are tentatively scheduled for completion by November 30<sup>th</sup>, 2009, although it is possible that an alternate deadline may be identified and agreed upon by the Contractor and the Department in the future.

## **Selection Criterion**

The Department's Proposal Review Team will score and review all proposals according to the following Selection Criterion:

- Experience and demonstrated capabilities in energy efficiency evaluation techniques, strategies, and principles, including study design, on-site data gathering in residential facilities, data analysis, statistical sampling design to address reliability, variance, and bias. Of particular interest is demonstrated experience in the interpretation and analysis of meter data, as applicable to *Blue Line*.
- Experience of the Contractor in successfully completing similar research, and ability to provide timely and in-budget research.
- Experience of key personnel, as well as the proposed staffing plan.
- Writing skills and abilities, including a demonstrated proficiency in conveying complex topics in clear and concise language.
- Quality and completeness of the proposal (in terms of coverage, organization, graphics, grammar, spelling, etc). The clarity and organizational aspects of the proposal will be considered an indication of those same qualities in any future deliverable from the Contractor.
- Price and value.
- To a lesser extent, physical proximity or availability to be in Vermont on short notice.

## **Terms and Conditions**

- Bidders must provide an hourly rate for various personnel to be assigned to each task identified in the proposal. While exact hours by task cannot be known with certainty, a best estimate should be provided with the proposal. The total budget for all contract work should not exceed \$149,000.
- The Department will retain ownership of all work products, which will be delivered to the Department at or before termination of the project.
- The Contractor will be required to enter into a confidentiality agreement to protect certain customer specific information from public disclosure.
- The DPS 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.
- News releases pertaining to this RFP, contract award, or the Project shall not be made without prior written approval from the DPS.

- Selection of the winning bidder shall be determined solely by the DPS on the basis that the proposal submitted is the most advantageous for the state.
- The DPS reserves the right to amend or cancel this RFP at any time and for any reason, as determined to be in the state's best interest.
- The DPS 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.
- The Contractor must not be currently employed by a firm currently working under contract to Vermont Energy Investment Corporation (VEIC), Efficiency Vermont (EVT), or Green Mountain Power (GMP), and must agree not to undertake such employment during the term of this contract.
- The Contractor must be available to begin work immediately after the contract is awarded and commit to completing evaluation research on *Blue Line* and other programs by November 30<sup>th</sup>, 2009.
- A lead Contractor and lead contact person must be identified in joint proposals

In addition to these Terms and Conditions, it is important to note that the DPS assumes no liability in any fashion with respect to this RFP or related matters. All prospective Contractors or Contractor Teams, by their participation in the RFP process, shall indemnify, save and hold the DPS 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.

## **Tasks and Activity Scheduling**

- *Kickoff Meeting:* Meet with DPS staff and other Parties to ensure a common understanding of project expectations, proposed tasks and timeframe, and related deliverables. Prior to this meeting, the Contractor must be familiar with the scope of all EEF programs described above and any potentially related or complementary EVT efforts. Contractors must come to this meeting prepared to identify the level of effort required to conduct the evaluation and the timelines associated with this assistance. This meeting will occur within two weeks following the date of award.
- *Revised Research Plan:* A revised Research Plan must be submitted to the DPS within two weeks following the kickoff meeting. It should document the common understanding among the Parties regarding methods, deliverables, and timing. This Plan will present the detailed schedule for completion of any interim products (e.g., may include sampling plans, on-site data collection protocols, draft analysis plans, interim review schedules, etc.) and the final deliverable.

- *Final Deliverables:* The Contractor must incorporate DPS comments on any and all draft deliverables and produce a final deliverable within three weeks from receipt of DPS comments.
- *Monthly Progress Reports:* Due to the DPS Project Manager within 10 days from the end of each month.

## **Project Management**

Management responsibilities include regular project updates with the DPS Project Manager. The Contractor and the DPS Project Manager will have a monthly conference call in which the Contractor will provide an evaluation progress review. Prior to each monthly call, the Contractor shall prepare a detailed written progress report describing progress over the prior month and identifying key topics for discussion, including any issues that need prompt attention.

## **The Proposal Submission**

The proposal should present a clear understanding of the issues to be addressed and a description of how the Contractor proposed approach accomplishes the evaluation goals. The proposal should be structured to provide the following information:

1. Introduction
2. Understanding of the research goals and associated issues
3. Overview of the proposed approach
4. Detailed Research Plan and related task descriptions
5. Descriptions of similar projects
6. Qualifications of firm(s)
7. Qualification of individuals
8. Management and staff structure
9. References
10. Timeline
11. Task and total project budget that includes a listing of all staff assigned to the project and their time allocations and billing rates
12. Appendix A: Sample report from prime contractor
13. Appendix B: Other attachments as appropriate

**Introduction:** The introduction should introduce the research team and provide general information about the team and how they will approach the project.

**Understanding of the research goals and associated issues:** This section should provide a discussion of the research objectives and the key issues associated with achieving them. The section will allow the DPS to assess the contractor's understanding of the objectives that need to be addressed.

**Overview of the proposed approach:** This section should present an overview of the contractor's research approach, allowing the DPS to determine whether proposed methods are appropriate to the objectives in question.

**Summaries and task descriptions:** This section should present the summaries, as described above, including an introduction that describes the overall approach/methodology, a description of individual research activities, a data management strategy, and a staffing plan. This section should be descriptive enough to aid the DPS in understanding how the research will be conducted. This section should also address any specific analytic approaches and related reporting activities.

**Descriptions of similar projects conducted:** This section provides a brief presentation of similar types of research conducted by the prime contractor and other key members of the research team. The discussion should allow DPS to assess the experiences of the Contractor or the Contractor Team relative to the goals of this project.

**Qualifications of firm(s):** This section is provided to allow the Contractor to present their corporate qualifications that are in addition to the above descriptions.

**Qualification of individuals:** The proposal should describe the individuals to be assigned to the tasks and include a resume for each of the key staff involved in the research.

**Management and staff structure:** The proposals should clearly define the team's management and operational structure.

**References:** The Contractor should provide at least three references of similar work for other clients. The references should include a brief description of the research effort including the name, address, telephone number and e-mail address of the client's representative for the referenced project.