1.0 Cover Page(s)

1.1 Program Title

Retail Merchants Association of New Hampshire-Energy Efficiency Program

1.2 Program Type

The first phase of this Program will include a number of elements or "types of programs" including the following (as numbered in Puc 2604.01 (c)):

1. Energy audits; 2. Weatherization of New Hampshire commercial buildings; 4. Revolving loan funds for efficiency related investment; 8. Programs to improve the electric and thermal energy efficiency of existing commercial buildings; 10. Education, outreach and information programs that promote energy efficiency, conservation and demand response; 11. Demand response; 12. Other: civic leadership; creation of larger public education campaign which will target retail transactions as learning opportunities

Potential elements which may be included:

5. Energy efficiency related work force training and development; 6. Integration of passive solar heating and ventilation; 7. Programs to increase compliance with the building energy code

1.3 Program Summary

The Retail Merchants Association of New Hampshire (RMANH) Energy Efficiency Program is a multiyear effort to leverage existing resources, GHGERF, potential federal recovery program investments, and other assets, to give RMANH members and other similarly situated businesses who own (or in some cases lease) commercial buildings, the tools they need to implement energy efficiency, conservation, and demand response programs to reduce their greenhouse gas emissions from use of fuel oil and other energy sources. The Program will begin with a series of educational efforts that will allow the Program to learn more about its members' current energy situation through an inventory of their energy usage and infrastructure. A concentrated public education campaign will be undertaken to inform these commercial customers of the opportunities available to them. The Program will advance from the public education effort to a process of enrolling members who will take advantage of different levels of services. Services will include energy evaluation, comprehensive energy audits and implementation of demonstration projects. The demonstration projects aspect of the Program will include the creation of financing packages. The Program will also seek to develop methods that will use the opportunity of retail transactions to connect participating businesses' retail customers with energy efficiency programs.

1.4 Low Income Residential Customer Qualification

Much of our educational work in stores both with employees and walk-in traffic will provide important conservation and energy efficiency materials and ideas to low-income customers.

1.5 Identification of Applicant Organization

The Retail Merchants Association of New Hampshire (RMANH) is a domestic non-profit New Hampshire corporation with a principal office address of 35A South Main Street, Concord, New Hampshire, 03301. NH Business ID # 64852. Principal Contact: Nancy Kyle, President, rmanh@rmanh.com, (603) 225-9748.

1.6 Identification of Subcontractors and Partners

Partner:

- The Jordan Institute (TJI) 11 Stickney Ave., 2nd Floor Concord, NH 03301

Subcontractors:

- The Dupont Group 114 North Main Street Concord, NH 03301

- White Birch Communications Group 114 North Main Street Concord, NH 03301
- Carbon Solutions NE @ University of NH Morse Hall 8 College Rd. Durham, NH 03824
- Clean Air-Cool Planet 100 Market St. Ste. 204 Portsmouth, NH 03801
  - NH Carbon Challenge 8 College Rd. CSRS Morse Hall Durham, NH 03824
- Ocean Bank 35 S. Main St. Peterborough, NH 03458

1.7 Authorized Negotiator(s)

James Monahan, Vice President
The Dupont Group
114 North Main Street
Concord, NH 03301
(603) 228-3322
jmonahan@dupontgroup.com

D. Dickinson Henry, Jr., Executive Director
The Jordan Institute
11 Stickney Ave, 2nd Floor
Concord, NH 03301
(603) 226-1009
dhenry@thejordaninstitute.org

1.8 Projected Energy Savings

The Commercial sector in New Hampshire uses 79.1 trillion Btu (TBtu) per annum or 34% of all non-transportation energy in the state. Of that, 79.1 TBtu, 63% is for electricity and 37% is for thermal use (see appendix A, figure 3). The commercial sector consists of approximately 24,000 buildings representing almost 384 million square feet (according to Carbon Solutions New England (CSNE) see Appendix B), of which 5,000 may be government buildings. That leaves approximately 19,000commercial buildings. The Retail Merchants Association has identified approximately 4,000 owners, many of whom own or operate multiple buildings, who fall under the commercial retail SIC code in New Hampshire. We assume that 8,000 to 11,000 buildings fall under the retail merchants' definition. The remaining commercial buildings fall under retail grocers and restaurant and lodging which we hope to include as the program expands.

Most commercial buildings have extremely poor envelopes, oversized heating and cooling systems and little, if any, heat, cooling or humidity recovery in their air exchange systems. As a result of poor design pumps and motors are usually grossly oversized. As the Program helps businesses tighten up commercial building envelopes, properly size HVAC systems, and introduce heat, cooling, and humidity recovery in air exchange systems, we will also dramatically reduce electric usage.

As reductions in site electric use of ten to fifteen percent results in over a threefold reduction in electric generation source fuel energy and lower transmission losses, **thirty to forty percent reductions** in total energy use are possible in this sector with proportional reductions in Greenhouse Gasses (GHGs). This initial pilot plans to make actual renovations in five to ten buildings or more within the first year depending upon project size, along with many smaller improvements to retailers' energy use.

Section 1.9 Projected Greenhouse Gas Emissions Reductions

The potential for reductions in greenhouse gas emissions (GHG) is particularly large in the commercial sector, for two reasons. First, as mentioned above, these buildings are in extremely poor operating condition, use extraordinary large amounts of energy (see appendix A, figures 2 & 3) and, even using conventional fossil fuels, after renovation should see GHG reductions of thirty to forty percent. In addition, if in our pursuit of **efficiency** we can switch users from inefficient fossil fuel systems to more efficient renewable energy or Combined Heat and Power (CHP) systems, much larger gains will be made in reductions in GHG emissions. There are particularly promising opportunities in this sector to greatly improve heating and cooling conservation and efficiency with wood biomass and air-to-air and geothermal heat pumps. These highly improved technologies make many of these systems much more efficient than their fossil fuel counterparts. We also believe

passive solar thermal may have significant efficiency and GHG reduction potential. Given our experience with school systems, we believe GHG reductions of **forty to seventy percent** may be possible.

1.10 Length of Program

The Program has a five year work plan, with the opportunity to extend beyond that end date. This proposal seeks funding for a 12 month effort and grant allocations in rounds 1, 2 and 3 of the GHGERF program. It is the intention of RMANH to seek additional funding in future RGGI allocation rounds or through special allocation proposals, as well as other funding sources.

1.11 Total Program Costs

Total program costs will include not only planning, auditing, and evaluation funds but will also include the complete cost of the implementation of the first ten to fifteen projects. The planning costs will run about $461,229; initial overview audit of 25 buildings $25,000 will cover about two million square feet; full evaluation and assessment of approximately one million square feet, 10-12 buildings at 100,000 sq. ft. each, $200,000.; and $500,000 in direct assistance to participants who then implement measures. The total retrofit implementation costs of $300,000 to $375,000 per building for five to ten buildings = $2,650,000. So the total program cost will be $3,001,230. Of this, $1,565,000 will be financed by the participants and a variety of non-RGGI funding sources. The initial request form RGGI is for $1,436,229 of which $300,000 will be in a credit enhancement revolving fund. This will give about a 2:1 return on the total RGGI dollars and a 2.6: 1 return on RGGI dollars minus the revolving fund when we complete the first five to ten projects.

1.12 GHGER Funds Requested

- Program Planning and start up costs $461,229
- Initial audits, evaluation and assessments $175,000
- Initial pool of straight rebates/incentive funds to get overall simple project paybacks to approximately 1.5 years = $500,000,
- Revolving fund for credit enhancement of $300,000.
  Total GHGER funds request= $1,436,229

2.0 Executive Summary

This proposal seeks to fund public education, start-up activities, building audits and demonstration retrofit projects for the Retail Merchants Association of New Hampshire's (RMANH) Energy Efficiency Program. Allocation of funds will be managed to best highlight the benefits of the program to RMANH members and similarly situated commercial customers. The Program is envisioned as a multiyear effort which will grow into one that leverages state, federal and utility resources as well as private investment. The Program will be administered by the RMANH in partnership with The Jordan Institute and with the support of public policy, communications, environmental, and energy consultants. Funding requests will be made for this award period as well as for several future award periods.

The Program is targeted at commercial customers who make up the second largest ratepayer group in the RGGI program (cir. 34%). The commercial group in particular has not been proactive in taking advantage of other utility programs in recent years. We anticipate that the success of the Program's early participants will help in attracting future participants. The Program will guide businesses through several steps toward efficiency improvements. While most participants will not undertake large-scale energy efficiency projects, all those who participate will take away meaningful information and improved access to program support. Many will adopt energy efficiency, demand response and other energy and cost saving measures.

As a first step, the existing membership of the RMANH along with approximately 4,000 other similarly situated businesses, will be marketed with information and invited to participate in educational seminars and training sessions. A targeted number of enrolled members, approximately twenty-five buildings from this group will participate in more substantial energy evaluations. At this stage of the process, a number of businesses will likely be matched up with existing utility CORE programs and demand response efforts. This group of participants will then be screened to select those who will have substantial energy audits conducted.

This screening process will result in 5 to 10 businesses ready to advance into large scale energy efficiency projects. The RMANH Program will then work individually with each business to structure appropriate financing packages which will include leveraging other state, federal and utility programs. In addition, the project financing will include access to credit support tools that will address barriers to entry associated with creditworthiness. In order to ensure that the energy efficiency projects proceed, the Program will provide project oversight and targeted project management services. Our initial financing partner, Ocean National Bank, will work with us to design these tools based on their experiences with a similar program which they have run with DRED for the past two years.

We will work closely with Carbon Solutions New England (CSNE) and their measurements tools recently developed for the Governor's climate change task force. Appropriate monitoring and evaluation tools will be used to determine the amount of energy savings that are realized, as well as the levels of greenhouse gas reductions achieved, cost of implementation, cost savings through reduced energy use and creation of green jobs. These measures will address activities at all steps of the process including enrollees' participation in demand response, CORE programs, and other efforts that were identified and started as a result of the Program's communications and educational efforts. The inventory tools created at the beginning of the process will allow for continued tracking and monitoring of all businesses that were touched by the Program. In addition to the core program outlined above, this proposal also includes important education, research and development efforts. These include working with Clean Air-Cool Plant to craft programs that will take advantage of the millions of retail purchase transactions which RMANH members undertake each year and turning those into carbon reduction educational opportunities.

As projects are completed, the Program will structure a public campaign to promote the benefits of the investment. Displays showing customers how the project has saved money and reduced pollution will be installed at RMANH member stores. In addition, public relations materials and news media materials will be prepared and used as part of the ongoing communications plan associated with the Program. Detailed results with links to additional information on the projects will be posted on several websites, including RMANH, TJI, CSNE and CA-CP.

Finally, it is a key objective of the Program to develop civic leadership on the topic of energy efficiency and greenhouse gas reductions. Here, the Program will seek to create champions from among the businesses and their employees who have participated and help them advocate to other retailers and other business leaders about the benefits of making these investments.

3.0 Scope of Work

See attached flow chart.

3.1 Major Tasks

The RMANH Program's administrative structure will include a program manager who carries out overall program administration responsibilities, including management of the financial elements of the program. The manager will be employed by the RMANH and will work closely with

The Jordan Institute. Most of the Program will be undertaken by partners and sub contractors as outlined below.

3.11 Education and Communications

The Program will include an ongoing public education and communications campaign. However, the most concentrated efforts will be in the first 60 to 90 days. The RMANH web site will be expanded to include a new Energy Efficiency page that will include information about the program and allow members to enroll. Printed material will be created that will include a brochure for the program, FAQs and a detailed enrollment letter. A data base of current members and SCI Code 52-59 businesses will be developed for use in marketing and promotion of the program.

Within the first 60-90 days of the Program, two regional energy efficiency seminars will be scheduled to promote the program. These events will be half day sessions in which members and other retail business will be invited to attend and learn about the RMANH Energy Efficacy program. These events will serve as the catalyst for enrollment in the Program. Following the 2 larger events, 3 smaller local sessions will be held, in order to reach out to other parts of the state where members reside. The Program will seek a news media advertising partner and will include some limited vendor participation. In addition, the RMANH will invite other local business groups to participate as co-hosts of the events.

A second round of seminars will be undertaken in late January 2010 and over time the Program will schedule two annual seminars and trade shows with targeted retail business leaders. A newsletter and *constant contact* program will be created to support an on-going communications plan.

Estimated hours: Program Manager, full-time position of which 20 hours a week for the first 90 days and 5 hours a week thereafter will be spent on education and communications.

Participants: White Birch Communications will oversee the education and communications plan. The Jordan Institute and Clean Air Cool Plant will be involved in the seminars' planning and presentations. In addition, the RMA has requested that Wal-Mart Inc.'s Sustainability division participate in education and communications.

3.12 Member Inventory and Enrollment

Two components designed to identify and inventory potential participants will be deployed. An initial survey monkey of current RMANH members will be put into the field shortly after award of the proposal. This survey will seek to identify early adopters and better focus the early communications and education efforts. A more detailed questionnaire that seeks to understand the business energy profile and inventory existing assets will be use to populate the Program's database.

The Program will ask members to affirmatively "enroll" in order to participate in the energy efficiency activities. This enrollment will require little immediate commitment, but will begin to narrow the group of businesses that will receive more focused attention.

Estimated Hours: Program Manager, full-time position of which 10 hours per week in first 90 days and 5 hours a week thereafter will be spent on member inventory and enrollment.

Participants: The Dupont Group and The Jordan institute will design survey and data collection instruments.

3.13 Immediate actions

The initial education, communication and inventory of participants will likely identify businesses who have taken very little action to date relative to energy efficiency. The initial surveys and inventory will help identify those businesses who should be taking some immediate and available actions to begin to save energy and help reduce greenhouse gases pollution. The Program will work swiftly with the businesses to sign them up for utility CORE programs and when

appropriate, demand response. These immediate actions will not require significant payments by the businesses or the need for audits or financing packages. This process will become part of the ongoing first steps as businesses enroll.

Estimated Hours: Program Manager, full-time position of which 100 hours over 120 days will be spent on immediate actions.

Participants: The Jordan Institute and The Dupont Group

3.14 Evaluation and Audit

The program will include two types of energy efficiency reviews for participants. Evaluations which will include analysis of energy (including fuel oil) use and cost along with onsite visits and case studies will be conducted for approximately 25 businesses during the first months of the Program. This evaluation will likely create some short term fixes that the businesses can undertake and might involve some limited investment. From this group of businesses a smaller group of ten to twelve candidates will undertake a full evaluation and assessment described below that will lead to five to ten full implementation projects.

The Jordan Institute will conduct a comprehensive Assessment and Evaluation of each building. This uses sub-contractors to perform blower door, infrared envelope analysis, lighting census and evaluation of natural lighting options, and HVAC system evaluation and suggested upgrades. Under potential heating and cooling options, we will look at air to air heat pump, geothermal, gas fired CHP, and improved boiler efficiency, as well as distribution system upgrades. Next, we will review the efficiency, demand reduction, and peak shaving potential of more efficient alternative fuel systems for each building including biomass, solar (thermal and PV), combined heat and power, and possible district heating collaborations where appropriate.

We will then provide both an energy model and a financial model of all the various viable alternatives and work with the owner to determine an implementation plan.

The results of the evaluation and audits will create a group of "projects." Each of these projects will be assigned a case manager who will work with the business to structure the project management which will include seeking bids, ordering materials, enrolling in utility programs, and engineering and contracting. Estimated Time: 130 days see flow chart Participants: The Jordan Institute

3.15 Project Financing and implementation

It is expected that the projects will range in size and scope. They will be categorized by costs into one of four categories: small, $10,000 to $50,000; medium, $50,000 to $150,000; large, $150,000 to $250,000; and extra large, $250,000 to $750,000 or more. The program will work out a cost-sharing package for each project that will include all available opportunities including grants, tax incentives, utility programs and customer participation. The balance of the project costs will be addressed through financing developed with Ocean Bank (and potentially other banks).

RMANH and The Jordan Institute will design the program to ensure participation by retail businesses while achieving the maximum feasible leverage of private finance. To ensure participation, we will need to address the economic barriers that have limited energy efficiency investment in the past. At a minimum, we presume that financing will need to be structured so businesses avoid up-front cost and experience positive cash flow through amortization schedules that ensure avoided energy costs exceed loan payment amounts.

For many businesses, however, that may not be sufficient. Our program will also need to overcome concern about investment horizons that extend too far into the future, reluctance to take on additional debt or to take on debt for cost reduction rather than business expansion, and general

concern about taking on any debt in the face of a bleak economic picture. RMANH and Jordan will thus incorporate all pre-existing means of reducing the building owner's share of project cost.

We expect that additional incentives may be necessary to induce many businesses to borrow and undertake projects. This will be particularly true for measures affecting fuel oil use, for which no pre-existing incentives exist. We will thus design incentives to be bundled with finance offerings where existing incentives are non-existent or insufficient. We will do that on the basis of a thorough review by Jordan of utility energy efficiency loan and incentive programs for the commercial sector from throughout the Northeast and beyond. We will seek to minimize reliance on incentives and will ensure that GHGER funds are used in the most cost-effective manner.

Finally, when the business wishes to finance its proposed share of project cost, experience indicates that in many cases the bank's creditworthiness evaluation will identify an insufficient coverage ratio as a barrier. It appears that the primary way to address that barrier will be to reduce the loan amount, and an allowance for doing so is provided for in the budget under the heading "credit support." We also will explore alternative forms of credit support and meet financing needs in the most cost-effective manner.

In leased property, split incentives present a major barrier. RMANH and Jordan will seek an opportunity to tackle that problem by identifying at least one landlord and tenant pair with multiple leased properties (or a major leased property) who is motivated to modify their lease to align the investment costs and benefits of efficiency investment.

Estimated Time: 55 days See Flow Chart

Participants: The Jordan Institute, Ocean Bank, and an accounting and law firm to be determined.

3.16 Measurement

The Jordan Institute and Carbon Solutions New England (CSNE) will work together to establish before and after energy use and greenhouse gas emissions from our project. This will include not only the specific buildings we work on but also the impact of our education program on other building owners, employees, and walk in customers. TJI will establish pre-project energy use and energy expenditures based on at least three years of data. On buildings where we make significant improvements, it is our intention to not only track the costs of the renovation, but to also embed sensors in the building so energy use can be accessed remotely at a finer detail than available just from utility bills. This will allow us to evaluate actual energy use and which measures are proving most effective. CSNE will then be able to extrapolate this data to develop GHG reduction potentials for the entire commercial sector across the state. CSNE will also analyze the cost of implementation and the annual costs savings from reduced energy use to quantify both environmental and economic benefits of the project. In addition, the results of this program will be used to modify the assumptions that were made to calculate greenhouse gas emissions and economic benefits of activities in the NH Climate Action Plan (NH Climate Change Policy Task Force, 2009). Estimated Time: 50 days & ongoing See Flow Chart Participants: The Jordan Institute and CSNE.

3.17 Coordination

The Program will actively seek to coordinate its efforts with those of other GHGER funded programs. In addition, the Governor’s Green Jobs initiative, particularly the workforce development elements, offer a good opportunity for training to take place at RMANH member facilities, thus meeting the goals of both programs.

The RMANH effort will also seek to engage member employees and potential customers who as a consequence of being exposed to commercial efforts will want to participate in home energy efficiency. Here, the Program works to match residential programs to employees.

3.18 Civic Leadership

A part of the Program's interest in expanding and bring forward innovation and larger community adoption there will be several civic leadership tasks included. These include a research component in which the RMANH and Clean Air-Cool Planet will develop a program that will seek to use the millions of retail transactions that RMANH members undertake each year to create a consumer carbon reeducation campaign.

A second element of the civic leadership included in the Communication plan, in which store displays associated with the completed projects will be developed. This will include a final case study for each project that can be used in future marketing. Finally, the Program will work with the participants to develop energy efficiency "Champions" who will be business owners and managers who will be encouraged to advocate with their peers and the community at large about the benefits of the Program and the need for more public investment and support for energy efficiency and other greenhouse gas reeducation efforts.

Estimated Time: Program Manager, full-time position of which 200 hours will be sent on civic leadership.

Participants: Clean Air-Cool Planet, The Jordan Institute, White Birch Communications Group & The Dupont Group

3.2 Schedule and Milestones

This proposal seeks funding for twelve months, although the program is built around five year planning horizon. Month one will be devoted to planning and preparation of materials and administrative activities which will include the first survey. Months two and three will focused on the seminars, enrollment and inventory activities. During this period, some businesses will be enrolled in immediate action activities outlined above (including demand response). Months four through twelve will include a continued education and communications program as well as undertaking evaluations, audits and project design. The project work will be on-going once the results of the evaluations and audits are known. Because the members are retailers, it is expected that November and December will be slow times for project implementation.

Several milestones will be evident in the program and will be measured by the number of businesses that enroll number of evaluations that take place and the completion of project financing and completions. Estimated Time: See Flow Chart Milestones are blue diamonds

3.3 Oversight & Quality Assurance

The RMANH will be responsible for the oversight of the program through its President and Board of Directors. A subcommittee of the Board has been in place for some time to oversee the organization's development of this Program. Projects will be evaluated and ranked by the sub-committee with technical support from the project sun-contractors.

Most projects will likely require financing. As a consequence of this, most projects will be to the bank's credit review.

3.4 Financial Management

The RMANH will service as the Program Administrator and will be responsible for allocation of funds in accordance with the Program budget and contractual requirements of the grant. The RMANH subcommittee will be responsible for reviewing and approving each project. Contractors and partners will enter into Letters of Agreement with the RMANH.

4.0 Project Benefits

Indicate the extent to which the proposed program can be expected to:

4.1 Reduce greenhouse gas emissions from all fuels used to provide electricity, heating and cooling in New Hampshire

This Program will combine efforts to promote retail commercial customers toward making changes in how they manage energy used for lighting, heating and cooling with direct investments in energy efficiency and fuel switching projects. By casting a large information net, businesses will be given the tools to better manage their energy usage. However, by also enrolling, inventorying and analyzing individual businesses, the Program will ensure that participants are actively pursuing emissions reductions and not passively receiving information that may not be acted upon. As evidenced in the GDS Associates study, smaller commercial customers lag in participation in existing energy efficiency programs. This Program will seek to identify what barriers exist and will develop tools to overcome businesses' inaction.

In addition, because this Program will include direct grants for evaluation, linked to resources to implement energy efficiency projects, the ability to take customers from analysis to completion will be well managed, supported and measured.

4.2 Be cost-effective

The Program's screening process will offer a cost-effective means of ensuring that dollars spent on energy audits and evaluations are targeted at those businesses that are most likely to advance projects to completion. The Program is designed to leverage existing utility programs and other state and federal funding sources. We expect that most projects will receive additional benefits of at least a quarter to a third of the full project cost.

4.3 Reduce New Hampshire's peak electric load

Peak load reductions will be achieved in several ways. First, by reducing overall load, peak load will be reduced. Second, by implementing demand response programs, additional significant peak load reductions can be made. Third, by switching to more efficient renewable and other energy systems, peak load will be reduced. We will also evaluate converting back up power units from diesel to propane or natural gas which could reduce peak demand through on site generation. Finally, efficient district heating and cooling alternatives will be explored and could further reduce peak demand.

4.4 Promote market transformation

In a number of forums and studies, barriers to active participation in energy efficiency by smaller commercial customers have been acknowledged. These include the challenges associated with triple net leases and credit risks in the small retail sector. This Program recognizes these challenges and will use the pilot nature of this effort to overcome these obstacles using specific tools in the form of interest buy downs and risk management. Cases will be closely managed to encourage the establishment of partnerships between tenants and building owners. In addition, the analysis and case by case project management will likely produce more information that can be used to address other barriers.

Above all, this Program will transform the market at a grassroots retail business level by offering actual demonstration projects that show real results; by continuing to offer assistance, other retail businesses will be more likely to undertake energy management efforts and make it a larger part of their business planning.

The Program's interest in investigating the potential ability to use the millions of retail transactions to educate and engage consumers in emissions reduction efforts offers a truly transformative opportunity.

4.5 Promote innovative technologies

Over the past three years, The Jordan Institute has worked constantly to promote innovative technologies in air sealing, envelope insulation, distribution systems, simplified controls, and heating, cooling, and humidity energy recovery systems. In addition, TJI has been closely following the ever-improving technology for biomass, CHP, and district heating. TJI, with the RMANH, will continue to bring this expertise to the commercial sector and help with implementation and dissemination throughout this sector. Similar to TJI's work in schools and municipal buildings, the commercial sector offers an outstanding opportunity to introduce the public to these new technologies and to see them in action.

4.6 Promote economic development

Energy Savings and Emissions reduction in the commercial sector will significantly reduce operating costs thus helping to preserve existing jobs. Implementation of all of the projects we are discussing will not only create jobs but also create a new workforce with the skills to do this work. As we solve the financial and educational barriers to this work, the commercial sectors participation will increase and continue to sustain these important economic improvements.

4.7 Promote energy cost savings

This Program will target retail businesses who are motivated to participate as a means of saving money on energy costs. At all levels of participation, businesses will be given tools to study their current energy spending and to investigate how to reduce those costs. We will make every effort to help clients maximize existing rebate and tax incentive programs.

4.8 Promote collaboration and provide useful information for future program evaluation and improvement

Working closely with Climate Solutions New England, The Jordan Institute will design and collect before, during, and after data that will be analyzed by CSNE to understand the full implications of our work. This continuing assessment and evaluation of real-time data will greatly enhance the Program's ability to improve the overall measures installed in the commercial sector.

4.9 Otherwise be consistent with the public interest and the purposes of RSA125-O:19

The Program is focused on the underserved commercial sector. A fuels-blind approach will ensure greater reduction in greenhouse gas emissions related to fuel oil.

5.0 Measurement and Verification

The Jordan Institute and Carbon Solutions New England (CSNE) will work together to establish before and after energy use and greenhouse gas emissions from each project. This will include not only the specific buildings we work on but also the impact of our education program on other building owners, employees, and walk in customers. TJI will establish pre project energy use and energy expenditures based on at least three years of data. On buildings where significant renovations are made, the Program will track not only costs of renovation, but also embed sensors in the building so that energy use can be accessed remotely at a finer detail than available just from utility bills. This will allow us to evaluate for several years after project completion actual energy use and which measures are proving most effective. This information will be shared with clients to make necessary improvements and adjustments to operating procedures. CSNE will then be able to extrapolate this data to develop GHG reduction potentials for the entire commercial sector across the state. CSNE will also analyze the cost of implementation and the annual cost savings resulting from reduced energy use to quantify both environmental and economic benefits of the project. In addition, the results of this project will be used to modify the assumptions that were made to calculate greenhouse gas emissions and economic benefits of activities recommended in the NH Climate Action Plan (NH Climate Change Policy Task Force, 2009).

6.0 Budget

Early Award Request: The RMANH requests that the commission consider an early award of at least the administration and education section of the proposal. Doing so will enable a swift outreach to retailers, helping to advance demand response efforts ahead of the summer cooling season. In addition, because Q-4 is an especially busy time for the retail sector, completing as much work as possible ahead of the holiday shopping season is a unique concern of this proposal.

Expense Items	Narrative Explanation	Cost
Expense Items		
Salaries and Wages	Management of financial elements and other administrative tasks. RMANH President Nancy Kyle will administer the Program and will assess a 7.5% administrative fee of non-project costs, totaling approximately $35,000, of which $5,000 will be charged as an in-kind contribution. The administrative fee is based on an estimate of time and professional oversight needed to ensure sound management of the program. A program manager will be hired to implement the program at a salary range of $56,000 plus 20% benefits cost. The salary range is based upon salary ranges for similarly situated program managers. The RMANH's existing public affairs consulting firm, The Dupont Group, will undertake an additional scope of work to provide business and program management consulting services, including monitoring and seeking funding from other sources, including ARRA, and state and national renewable energy programs, at a monthly rate of $4,000 ($48,000). In addition, The Dupont Group will seek to expand the Program by reaching out to other commercial trade groups, liaison with other funders and promote the program to community leaders. The retainer is based on the firm's estimated time and resource requirement and is similar to existing fees for similarly sized client programs. (Hourly rate of $175 x 22 hours per month.)	$153,000 ($5,000 of which is in-kind)
	A case manger position will be created to support direct interaction with businesses that enroll in the program. The case manager will be responsible for on-site visits, assisting participating businesses with structuring projects, managing initial financial analysis and guiding projects through the process. The salary range for the case manager position is $45,000 annual salary plus a 20% estimated benefits costs. The salary range is based on similar positions currently funded at The Jordan Institute.	$55,000
Professional Services	Legal and accounting services associated with the establishment of financial accounting, consultant and subcontractor contracting, as well as GHGF compliance. Individual firms have not yet been retained for this work. The budget estimate assumes 75 billable hours at an average rate of $230.	$17,250
Environmental & Energy Consultation	The Jordan Institute will provide technical planning, financial planning, evaluation and assessment design, templates for initial walk through audits, and comparison of each phase of the project with other programs around the northeast and the country. TJI will also be instrumental in its	$96,000

	interactions with the various utilities to maximize coordination of existing and proposed program incentives and rebates with this commercial implementation proposal. TJI will use its extensive contacts to help maximize the use of new installation and equipment technologies as well as developing comprehensive monitoring and evaluation post installation both onsite and through remote access. This will take considerable coordination with program participants as well as energy providers, contractors, architects, and engineers. This will require approximately 10 hours a week of Mr. Henry's time 10 hours a week of Mr. Burrington's time and technical and financial consulting time from various Jordan staff including Paul Leveille, Gary O'Connell, John Gaston, and John Walker for financial modeling.	
	Education &Communication	
Communications & Educational Management	A targeted campaign will promote the benefits of energy efficiency investment. Public relations and news materials will be prepared and used as a part of the ongoing communications plan. Work will be implemented and completed by White Birch Communications Group, who will be retained at an annual rate of $40,000; an estimate of 130 annual hours by senior consultant @ $150 per hour; 150 annual hours by associate @ $100 per hour and 125 administrative hours @ $40 per hour.	$39,500
	Environmental communications expertise and council will be used for the design and implementation of the Program's educational and communications efforts. These will be provided under agreement with Clean Air-Cool Planet. Robert Sheppard, Corporate Campaign Manager will allocate 20% of his annual time at a cost of $23,493 in salary and benefits; Roger Stephenson, Executive Vice President, will allocate one day at $487. In addition, estimated ground transportation charged at .50 per mile will be budgeted at $500.	$24,479
Communications & Educational Materials	The RMANH website will be expanded to include a new Energy Efficiency page to provide information about the program and enrollment, printed materials, *constant contact* news letter program, and an on-going news media campaign that will be deployed. Printed communications material costs are estimated at $1 per contact, with 3 contacts targeted at 4,000 businesses ($12,000).	12,000
Data Base Development	A database of current members and SCI code 52-59 businesses will be developed for use in marketing and promotion of the program. The database will be acquired from a commercial vendor and incorporated into the Program's database by the program manager.	$3,500
Program Educational Seminars & Workshops	Advertising will include print and internet banner advertisement targeted at the retail business sector. The Program will seek a news media organization to underwrite the promotion of the educational seminars. This underwriting will include in-kind contribution of advertising and creative assistance.	$5,000
Comm. & Ed. Local meetings	White Birch Communications, in collaboration with the program manager and Clean Air Cool Plant, will undertake 5 regional meetings to meet with members and other businesses to promote the program and offer an educational seminar. Cost will include facility rental,	$10,000

	refreshments and other supports. $2,000 per event.	
Civic leadership	Thirty on-site trainings for RMANH members provided by Julia Dundoff, under agreement with Clean Air Cool Planet at an agreed upon fee of $15,000 plus $500 for ground transportation costs. A greenhouse gas reeducation member benefit and promotion program will be implemented to include store displays along with a storefront logo. The estimated cost for this effort is $10,000, of which 50% will be in-kind or donated. The Program will design a research project associated with matching NH's millions of retail transactions with customer education. The research will be used to seek a larger research grant from a national foundation.	$20,500 ($5,000 of which is in-kind)
Measurement	RMANH is aware that CSNE has requested GHGRF funding to offer measurement services to program such as the RMANH. If CSNE is able to secure GHGRF resources, this element of the RMANH proposal will not need additional funds.	$10,000
	Project Expenses	
Preliminary audit	Building walk-through and review of energy bills. Twenty-five buildings at $1,000 each.	$25,000
Evaluation & Assessment	Ten to twelve audits at $20,000 each, circ. Customer pays 25%.	$150,000 + ($50,000) cust.cntrb.
Projects	Projects will be divided into four groups: Small $10-50K Medium $50-150K Large $150-250K Extra Large $250-750K These efficiency projects may include conversion from fossil fuel to biomass Costs off-set by project incentive grants of $500K Project oversight ($180,000)	Direct Project Support $500,000 Customer & Other Rebate In-kind ($1,230,000)
Credit support	Where necessary, to meet bank coverage ratio or other creditworthiness requirements, additional cost-sharing or, potentially, alternative forms of credit support.	$300,000
Financial packaging	The project will structure financing packages on a fee for service basis.	$25,000
Revenue	The program may receive revenues from various sources. However, it is the intention of the Program to retain these funds as a means of expanding the program. In addition, the RMANH will seek to share environmental attributes with participants in order to expand and continue the program after GHGRF have expired. Potential revenues will come from non-member registration fees at regional seminars, as well as a sharing of demand response revenues. As resources associated with the ARRA emerge, the RMANH will seek to expand the Program, or offset GHGR funds. All funds will be accounted for and shown in grant compliance reports.	$1
Additional	Leverage existing utility rebates, tax credits, FCM payments, etc.	($335,000

Resources	Estimates are based on evolving utility rebate programs, incentives, ARRA and federal tax code opportunities.	estimate)

7.0 Applicant Qualifications (See attached resumes)

The Retail Merchants Association is a statewide membership organization well-positioned and qualified to administer this energy efficiency program. The organization has been in operation for nearly 80 years. The RMANH operates other commercial ventures with its members, including a freight delivery concern; a credit card program; and, in partnership with the Retail Grocers Association, a workers compensation program that has been managed by the organization for several years.

The Dupont Group is a well-established public affairs firm based in Concord, NH, who has been in operation since 1992. The firm has significant experience in the energy and environmental sector and brings a great deal of business and policy expertise to the program. In addition, the firms Principle, Edward Dupont, operated a heating oil and HVAC company in Rochester, NH from 1972 to 2000 which offers an important element of technical expertise to the program. The Dupont Group has worked with the RMANH and as a result, has a strong understanding of the retail sector and members' needs and business structures. The Dupont group will act as a general consultant to the Program and will work with the RMANH to oversee the implementation of the Program and structure membership tracking and message development.

White Birch Communications Group is a Concord-based public relations and communication LLC partially owned by The Dupont Group. The firm will have responsibilities to implement news media campaign, organize communications programs, and manage events. All of these services will be deployed as part of the RMANH program.

The Jordan Institute works to implement significant climate change solutions in New Hampshire by reducing energy use in buildings. Energy reduction is the fastest, most cost-effective strategy to reduce greenhouse gas emissions, as buildings represent 59% of all energy use in the state. The organization implements its mission through high performance building consultation, comprehensive project oversight for major energy efficiency projects, training of professionals in the building design and construction field, and energy-related state policy design and implementation. The Jordan Institute is comprised of uniquely motivated staff whose collective experience includes energy policy, engineering, residential construction, engineering, education, and architecture.

Clean Air-Cool Planet has a long history of working with a variety of businesses in the Northeast to address their institutional greenhouse gas emissions. CA-CP's tested model of engagement with businesses includes three complimentary elements: outreach and education; direct assistance to the company's leadership; and promotion of the company's solutions and successes within the industry and to the general public. CA-CP has a demonstrated ability to identify the concrete gains regarding public relations and employee retention and profitability that businesses can benefit from by reducing their greenhouse gas emissions.

Ocean Bank will work with the RMANH and its partners to consider applications from partnering businesses for loans to finance the businesses' share of energy conservation, efficiency and demand projects. The bank currently offers an Energy Efficiency Business Loan program and welcomes the opportunity to consider applications from businesses seeking to reduce costs and greenhouse gas emissions through these projects.

9.0 Letters of Interest or Commitment (see attachments)

Cost-Effectiveness Analysis Spreadsheet:

The cost-effectiveness worksheet is attached; however, the spreadsheet and proposal, where necessary for this analysis, will be updated and submitted by the deadline of Friday, March 27th.

Nancy Kyle, President
RMANH

Appendix A:

- http://www.nh.gov/oep/programs/energy/nhenergyfacts/documents/electric_power_sector.pdf
- http://www.nh.gov/oep/programs/energy/nhenergyfacts/documents/consumption_summary.pdf

Figure 1:

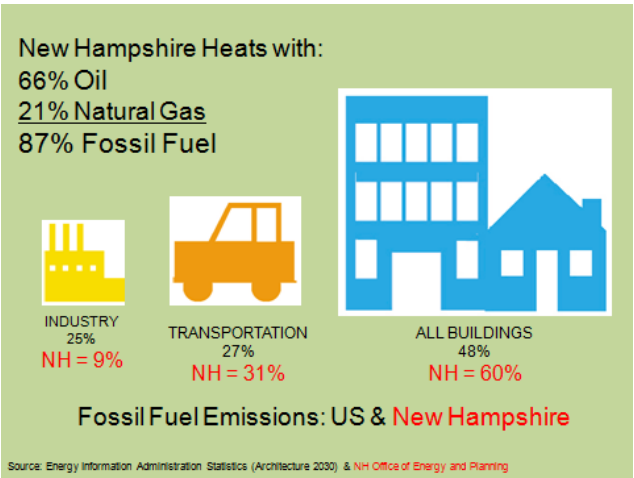
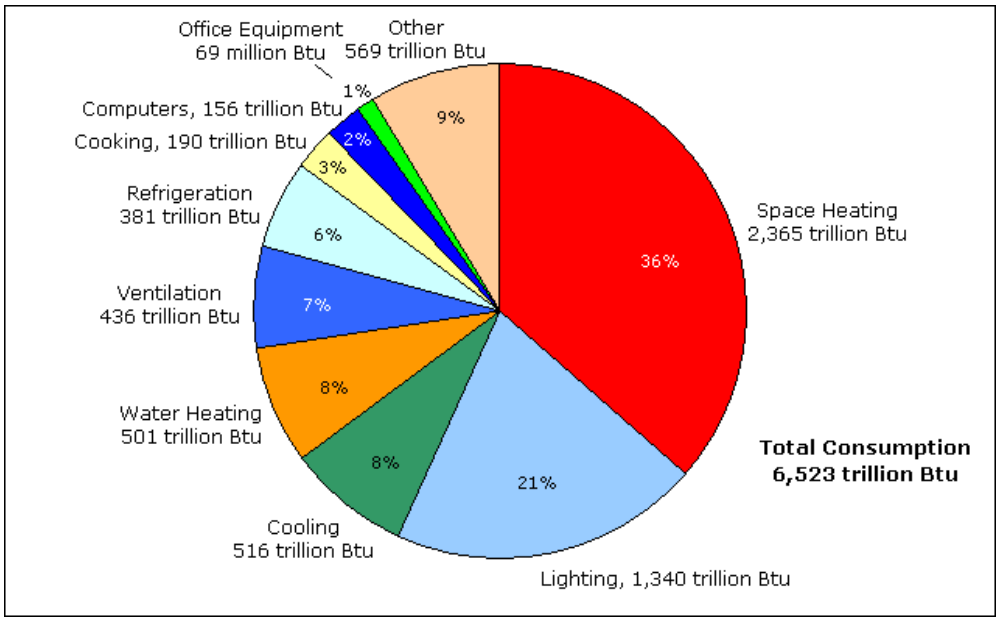
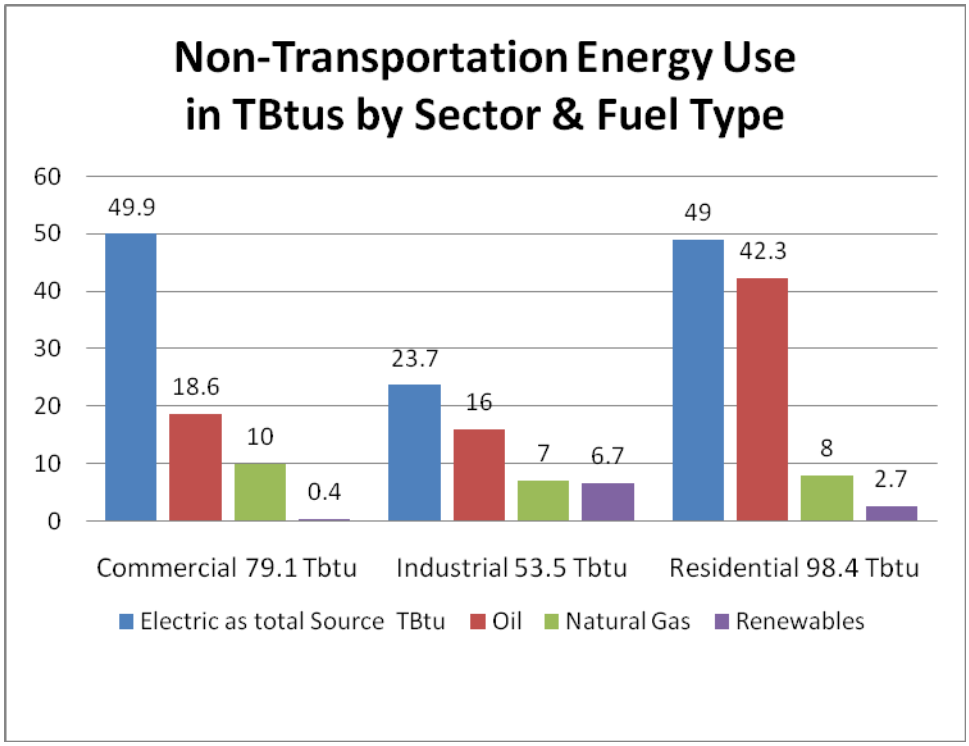


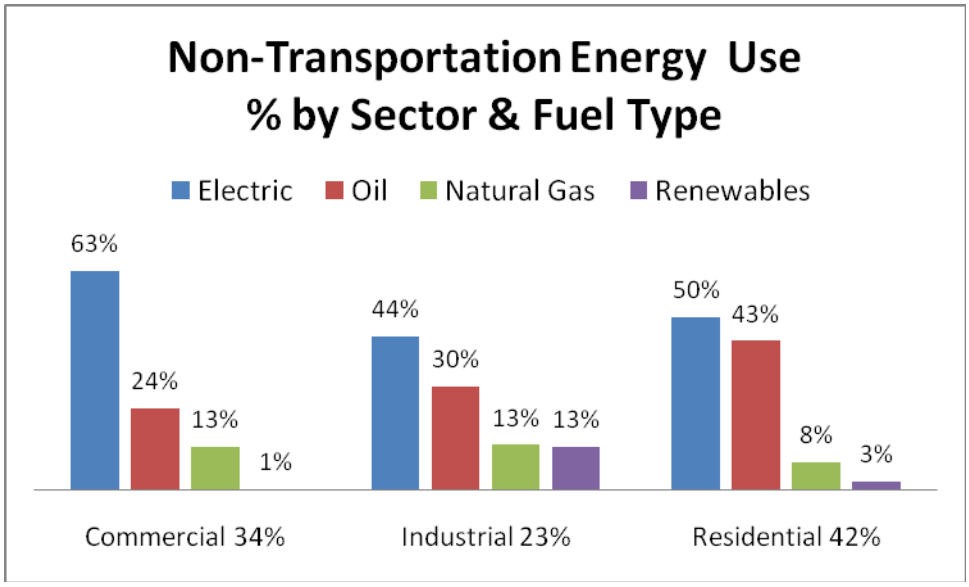
Figure 2: More than half of energy consumed in commercial buildings is used for space heating and lighting.



Source: Energy Information Administration, 2003 Commercial Buildings Energy Consumption Survey, Table E1A.

Figure 3: **2005 Energy Data for New Hampshire**





Appendix B – Commercial Sector Analysis by Carbon Solutions New England.

Overview of Analysis

Estimates and projections of the number of commercial buildings and the total commercial floor space in NH are derived primarily from Commercial Buildings Energy Consumption Survey (CBECS) data produced by the Energy Information Administration (EIA). CBECS reports values for the number of commercial buildings and the total commercial floor space within New England for the years 1992, 1995, 1999, and 2003. These values were used to estimate the average commercial building floor space (16,150 sq.ft/building). CBECS energy use data were used to calculate direct fuel use and electricity use per square foot of commercial floor space. Fourteen years (1990-2003) of Environmental Protection Agency (EPA) state emissions inventory data were used to calculate the percentage of New England emissions that occurred in NH (8.8%), which was used as a proxy for the percentage of New England commercial floor space which lies within NH. Growth in the number of commercial buildings and the total floor space was projected using a linear regression of historical CBECS data. Energy use per square foot of commercial floor space by fuel type was characterized using CBECS energy use data. Greenhouse gas emissions resulting from commercial energy use were calculated using EIA emissions factors. The resulting estimation of commercial buildings and floor space follows:

In 2008 within NH:

23,769 commercial buildings

383,880,000 square feet of commercial floor space

1.40 MMTCO2e of greenhouse gas emissions from direct fuel combustion

2.44 MMTCO2e of greenhouse gas emissions from electricity use

3.84 MMTCO2e of total greenhouse gas emissions

The estimated impact of potential changes to the business-as-usual scenario for New Hampshire's commercial building stock is modeled, as applicable, by changing (1) the energy intensity per square foot of new/existing buildings, and/or (2) the fuel profile used to meet those energy demands in new/existing building. The net economic impact of changes to New Hampshire's commercial building stock is modeled in a given year as the difference between to cumulative avoided fuel expenditures and one-time plus cumulative recurring costs of the implementation. Currently, modeling of potential efficiency gains in commercial building relies on grounded but theoretical assumptions of these parameters. By documenting actual realized efficiency gains resulting from implemented efficiency measures, the model can be parameterized using field-verified values, vastly refining the accuracy of the projected emissions and economic savings.

Definition:

Commercial buildings, as defined by CBECS, include buildings operated for education, food sales, food service, health care, lodging, mercantile and service, office, public assembly, public order and safety, religious worship, warehouse and storage, and other non-industrial or residential uses.