

### **1.1 Program Title**

New Hampshire Schools Benchmarking Project

### **1.2 Program Type**

TRC's New Hampshire Schools Benchmarking Project falls under the following types of programs pursuant to Puc 2604.01(c):

8. Programs to improve the electric and thermal energy efficiency of new and existing residences and commercial buildings
10. Education, outreach and information programs that promote energy efficiency, conservation, and demand response;

### **1.3 Program Summary**

Drawing on extensive benchmarking experience and energy efficiency program design, TRC has developed this proposal to assist the PUC in benchmarking to support evaluating the energy performance of New Hampshire's schools and the efficacy of efficiency upgrades. The proposed scope of work includes specific tasks to market and administer benchmarking to schools in New Hampshire.

### **1.5 Identification of Applicant Organization**

#### **TRC Companies, Inc.**

21 Griffin Road North  
Windsor, CT 06095

TRC Companies, Inc. is a publically-held (NYSE: TRR), for-profit company.

Year Incorporated: 1971

State Incorporated: Connecticut

TRC Companies, Inc. is registered with the Secretary of State to do business in New Hampshire.

#### **Contact Information:**

Thomas P. Rooney  
Technical Director  
31 Milk Street  
11<sup>th</sup> Floor  
Boston, MA 02109

Phone: (617) 933-9861  
Fax: (617) 350-3443  
Email: trooney@trcsolutions.com

### **1.7 Authorized Negotiator(s)**

Francis Reilly  
Vice President  
31 Milk Street  
11<sup>th</sup> Floor  
Boston, MA 02109

Phone: (617) 350-6699  
Email: freilly@trcsolutions.com

Signed:



### **1.8 Projected Energy Savings**

TRC's New Hampshire Schools Benchmarking Project will not provide any direct savings.

The initial Schools Benchmarking Project Report provides district officials with a building by building comparison of energy use and recommendations for “next steps”. These steps might include having an energy audit performed, focusing on heating energy use reduction or focusing on lighting reduction.

Each Report directs school officials to energy efficiency programs run by New Hampshire utilities and other agencies such as The Jordan Institute. Based on these programs the district can create a district Energy Plan that sets specific Performance Targets for each building. Developing performance targets and providing an area of focus – electricity or heating – for schools pushes them to take action. Taking action can result in documented savings of as much as 20%.

Succeeding Benchmarking Reports can not only document savings from strategies employed, but serve as ‘community reports’ of savings.

### **1.9 Projected Greenhouse Gas Emissions Reductions**

TRC's New Hampshire Schools Benchmarking Project will provide no direct greenhouse gas emissions savings.

### **1.10 Length of Program**

The Benchmarking in Schools Program can continue indefinitely since schools can update their data every year and continue to monitor energy use through continued benchmarking. Funding through this proposal is sought for the first two years, during which the majority of New Hampshire school buildings can be benchmarked. An on-going program would require additional funding.

### **1.11 Total Program Costs**

**Total** proposed program costs, as included in detail in Attachment C are \$499,948 for the proposed two year Project period.

### **1.12 GHGER Funds Requested**

The proposed amount of funding requested from the GHGER Fund to support the proposed program is \$499,948. As stated in Section 6, the costs associated with the development of the BEPS system are considered an In-Kind contribution.

## 2.0 Executive Summary

*In 2008, TRC received the Prestigious EPA Energy Star Partner of the Year Award. TRC was the sole award winner in the service provider category.*

One of the nation's largest energy and environmental professional services firms, TRC's staff of over 2,400 provide services to America's major industries, utilities, banks, insurance companies, federal, state and local government agencies from 74 offices nationwide. Established in 1971, TRC was the first energy and environmental services firm to be listed on the New York Stock Exchange (NYSE: TRR). At TRC, our teams of engineering and environmental professionals are focused on helping our clients balance environmental challenges with the need for economic growth—all leading to a more sustainable future. We are strongly committed to economic development and job creation in New Hampshire.

The TRC team is comprised of nationally recognized experts in the development and application of energy benchmarking tools. We have benchmarked more than 3,000 K-12 schools in five states. Since TRC has extensive experience in benchmarking schools across multiple states, we have an understanding of how to market to and coordinate with multiple districts and administrators. As part of our services, we have facilitated close to 100 ENERGY STAR Building Label certifications for schools as well as multiple school district-level ENERGY STAR Leader Awards.

In New Hampshire, there are approximately 668 schools including 400+ public school buildings and 200 private school buildings. The average building was constructed 36 years ago. Energy costs for electricity and heating fuel have risen dramatically in NH over the past five years, while at the same time, electrical energy use in schools has increased due to addition of air conditioning to buildings, a large increase in Information Technology resulting in the purchase and use of computers, servers, projectors and smartboards. The result is that districts across New Hampshire are feeling the impact of steadily increasing utility bills and adding to the amount of CO<sub>2</sub> being released into the atmosphere threatening progress toward meeting targets for reducing greenhouse gas emissions.

The electric and gas utilities in NH currently provide energy efficiency programs and strategies to help school districts reduce their energy use. For example, nhsaves@school, a PSNH program, provides funding for specific technologies as well as funding for energy audits, commissioning contracts and other technical assistance. The Jordan Institute, with a grant from the EPA, has worked with over 130 buildings to submit energy use data to EPA Portfolio Manager as a "first step" in assessing building energy performance. While these programs have had an impact, the majority of school buildings in New Hampshire have not taken advantage of these programs.

The New Hampshire Schools Benchmarking Project proposes to sign up 250 New Hampshire public K-12 schools in a no cost building benchmarking initiative. Using its Building Energy Performance System (BEPS), TRC Energy Services will generate a Report describing energy use for each building and compare total building EUI in Btu/square foot per year, electrical use,

heating use based on degree days, cost per student and cost per square foot and compare that use with the average or mean of other NH schools. The Report includes the carbon emissions (in tons) associated with the building's energy use.

As the number of benchmarked schools grows, the more accurate the averages and means become and thus the building's "position" in the sample. As districts submit multi-year data and update that data each year, the NH Schools Benchmarking Project database can provide a yearly snapshot of the overall energy use and carbon emissions of New Hampshire public schools and document the impact from year to year of energy efficiency and renewable energy programs and initiatives.

The Project database can then be used to inform the Energy Efficiency & Sustainability Energy Board, the NHPUC, utilities, and the Department of Education of the baseline energy use in New Hampshire schools and the initiatives that have had the greatest impact on energy use reduction.

The beauty of the BEPS program is that at the same time that it compares a building with NH buildings it also sends material to the EPA Portfolio Manager program, allowing the building to receive a Portfolio Manager score and, if justified, an ENERGY STAR label. As one part of the Project, TRC proposes to oversee the EPA certification process for ENERGY STAR approval. As the number of New Hampshire ENERGY STAR labeled buildings and ENERGY STAR school district Leadership Awards increase, New Hampshire can be seen as a true leader in energy efficiency and climate change actions.

The real impact of the Project will be seen in how well it directs districts to existing or new funding programs for energy efficiency technologies. The Benchmarking Report provides basic recommendations for immediate strategies and links schools with their utility programs and/or other efficiency-related initiatives. If an energy audit is deemed to be the first step, then the Report makes that recommendation and gives the name of the institution that can assist (e.g., nhsaves@school, the Jordan Institute, potentially others).

The success of the NH Schools Benchmarking Project depends on a strong marketing and support effort. When school districts submit data, there will invariably be questions, errors and omissions...but these are addressed by TRC experts with years of experience who help district officials throughout the process from finding their bills to putting them in proper order to reviewing reports to assisting them in contacting the right person to help them implement change. TRC is with them throughout, simplifying the process.

TRC personnel who are well-acquainted with schools and the benchmarking program attend conferences of school leader associations to promote the Project and provide promotional articles and information to these organizations for inclusion in newsletters and announcements.

The New Hampshire Schools Benchmarking Project will take the mystery out of energy use reporting and trending and make it easy and comfortable for districts to participate. More importantly, it will leverage the efforts of NH PUC and utilities to ***maximize energy efficiency in buildings***. When implemented in public schools, the project would also serve to ***lead by example in government operations***.

### **3.0 Proposed Work Scope and Schedule**

#### **Task 1: Adapt the Building Energy Performance System (BEPS) to New Hampshire**

TRC will adapt the BEPS to New Hampshire school data and incorporate as many earlier EPA Portfolio Manager reports as possible into the database. This work will include review and incorporation of state energy planning and climate change planning.

#### **Task 2: Marketing and Outreach to Schools**

##### **SubTask 2a. Marketing Plan development**

Under this task, TRC will develop, with input and approval from the PUC, a marketing plan for working with the PUC to distribute information to schools about the New Hampshire Schools Benchmarking Project. Based on TRC's experience marketing similar K-12 energy benchmarking programs in five other states, TRC proposes to leverage existing resources as a key element of its marketing plan. These existing resources come in many forms, but primary among them are the structured organizations that customers already communicate with and participate in. These organizations are primarily professional groups such as the New Hampshire Association of School Business Officials, the New Hampshire School Boards Association, the Jordan Institute, the Northeast High Performance Schools Exchange, and the New Hampshire Department of Education. In each case, the customer already knows these groups, goes to their sponsored events, reads their newsletters, and looks to them for solutions to onsite problems. TRC has successfully developed and used strong relationships with many of these types of organizations in other states. We propose in our tasks below to continue to leverage these relationships on behalf of PUC while beginning to work with different organizations.

##### **SubTask 2b. Plan Implementation**

TRC will attend conferences as a vendor or in conjunction with NHPUC. TRC will present at conferences as invited and have a table in vendor areas to hand out promotional literature, answer questions and sign up specific districts.

As the database grows and material becomes available, TRC will produce reports for association and organization newsletters and submit for publication.

##### **SubTask 2c. Quarterly Newsletter**

TRC will produce a quarterly newsletter to be distributed to all schools, supporting associations, design firms that work with K-12 schools and supporting organizations by mail or email as decided in the Marketing Plan. This newsletter will announce ENERGY STAR awards and contain summary information from the database.

##### **SubTask 2d. Providing easy access to the benchmarking team**

TRC believes that making every aspect of schools' participation as easy as possible is crucial to the project's success. TRC maintains a toll-free schools benchmarking number as well as an email address in each state where it is providing K-12 energy benchmarking. TRC will broadly publicize the number and a dedicated email address so that school administrators can reach us.

### **Task 3: Benchmarking Schools**

**Subtask 3a. Gathering Data:** Under this subtask, TRC will work with school districts to gather energy consumption data. TRC has pre-established Utility Data Release Forms for use where needed. TRC's data acquisition approach therefore accepts utility bill hard copies, PDF files, spreadsheets, or direct access from natural gas and electric utilities. TRC's BEPS system is also already set up to accept and automatically convert to BTUs fuel oil, propane, kerosene, or even wood use as heating fuels.

TRC has experience in benchmarking over 3,000 schools across multiple states, including New York, New Jersey, Massachusetts, Wisconsin, and Texas. TRC understands the process of collaborating with school professionals. In New York, the benchmarked districts currently in our school database contact *us* with questions and expect *us* to call them for their yearly updated reports. Leveraging our hands-on approach to building relationships with the schools, as well as our experience and interactions with other organizations, we hope to be able to achieve significant participation in our program as rapidly as possible. As such, we propose to set the aggressive goal of reaching 75 schools in the first year of this program and 175 in the second year, for a total of 250 schools. *Moreover, we are proposing to have 5% of our profit be contingent on benchmarking at least 200 schools by the end of this two year program.*

**Subtask 3b. Compiling and Analyzing Data:** After gathering the energy usage data, the data will be uploaded to TRC's BEPS system. The BEPS System was designed specifically to meet the needs of the K-12 school market. The database accepts and integrates each and every element of both building data and monthly energy consumption and cost data necessary to the building and district reports. The building Report provides six energy use categories (total EUI in Btu's/square foot/year, electricity use in kWh, heating energy use in Btu, weather adjusted heating use by degree days, cost per sf and cost per student) and benchmarks them against other NH schools. The Report includes a carbon footprint output. (see Attachment B, Energy Benchmarking Sample Report).

**SubTask 3c. Assist schools in developing action plans based on the results of the data:** BEPS is currently set up to generate pre-formatted reports showing school's individual building results as well as district summary reports. The report format also includes percentile rankings showing district administrators where their buildings stand relative to statewide averages/medians (see Attachment B). These reports include a "Recommendations" section customized from that building's data and including information on any incentives available from utility energy efficiency programs, the New Hampshire Department of Education and other funding sources.

From there, TRC will help schools access New Hampshire organizations, such as the Jordan Institute, and other providers to develop action plans based on the results of the data to help schools reduce their energy consumption. These plans will include short-range low/no cost options and long-range capital projects. The plans will also show the expected costs and outcomes of the different plans. Future benchmarking will then allow PUC and school districts to see the results of their building upgrades.

**Subtask 3d. Quality Assurance** is critical and TRC's BEPS system contains several data validation routines that automatically check data input against valid ranges for various types of

information. The system flags both data inputs and resulting calculated values (kBtu/sq.ft. for example) that are outside these ranges. In addition, prior to sending out a set of district benchmarking reports, the findings are discussed by phone with the district administrator(s) to ensure that the findings match their understanding of their own facilities. Finally, an internal TRC QA team randomly reviews and compares original data sources against the database itself to ensure accuracy. TRC will include its QA results in its monthly report to the NHPUC.

#### **Task 4: EPA Portfolio Manager and ENERGY STAR awards**

**Subtask 4a.** Uploading data to EPA Portfolio Manager: BEPS includes the data required by EPA Portfolio Manager. Once data is uploaded, it is automatically error-checked prior to uploading to EPA's Portfolio Manager. The building is now logged into the EPA system and Portfolio Manager provides a whole building score that becomes part of the TRC School Building Report.

**Subtask 4b.** Help to guide the top performing buildings through ENERGY STAR certification: BEPS is specifically designed to handle EPA Portfolio Manager's inputs and outputs. In order to maintain quality standards, EPA has set up a multi-step process that must be followed to receive the Building Label. Using BEPS to identify qualifying school buildings, TRC will leverage our experience applying for this award in other states and manage the entire EPA-required process, including its required forms and inspections, to bring New Hampshire schools completely through to the receipt of ENERGY STAR Labels. TRC has provided exactly these services for close to 100 K-12 schools. EPA recently updated its K-12 Portfolio Manager model on February 23, 2009. TRC has been working with EPA on this update for some time and BEPS is modified and ready to integrate with the new model.

#### **Task 5: Reports**

**Subtask 5a.** TRC will generate monthly reports tracking the progress made in benchmarking schools and summarizing the overall data according to formats developed with the NHPUC. The BEPS system was designed to allow for the addition of parameters at any time, which can then immediately be used as a benchmark for analysis. Additionally, the system can summarize statistics such as average, median, maximum, minimum, and standard deviation for each of the data elements in the database.

Within the BEPS System, TRC has developed an exclusive *Graphinator* feature. This feature allows the user to instantly analyze and compare any of the data elements with any other. For example, PUC staff can instantly evaluate and rank schools' energy use by age of building, type of school, size, geographic location, percent air conditioning, or any of several other baseline parameters.

**Subtask 5b.** Report on schools that have earned an ENERGY STAR rating: TRC has developed case studies for the seven New York school districts that it has facilitated through this process. TRC has also developed both "best practices" and "Tips, Tricks, & Traps" documents for other states' K-12 markets and will leverage that experience to develop New Hampshire-specific "best practices." These pieces of information will be broadly disseminated as discussed in Task B above.

**Subtask 5c.** Propose to the NHPUC other possible incentives for the project: Under this subtask, TRC will work with the previously identified stakeholder groups to determine the specific barriers which are preventing the implementation of energy efficiency measures in schools. TRC will then propose other possible incentives for the project to NHPUC.

**Subtask 5d.** Submit a Final Report to NHPUC at the end of two years documenting all findings, analyzing and critiquing the Project and all Tasks associated with the Project, recommending next steps and providing an overall Project Summary.

The number of hours allocated to each task and which staff member(s) will complete the tasks can be found in Section 6: Budget.

Table 1. NH Schools Benchmarking Project Task Schedule

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
Task 1	Adapt BEPS									
Task 2a	Develop Market Plan									
Task 2b	Implement Plan									
Task 2c	Quarterly Newsletter									
Task 2d	Communication channels									
Task 3a	Gather Data									
Task 3b	Compile and Analyze									
Task 3c	Direct Assistance									
Task 3d	Quality Assurance									
Task 4	EPA Activities									
Task 5a	Monthly Reports									
Task 5b	EPA Reports									
Task 5c	Recommendations to NHPUC									
Task 5d	Final Project Report									

## **4.0 Project Benefits**

4.2 Be cost-effective: The database developed by the Project will be a cost-effective method to determine energy use in NH K-12 schools today (or in an earlier base year if enough data can be entered) and measure the impact of energy efficiency programs, training programs such as the Building Operator Certification program, and other federal, state and community programs that contribute over the next two years. Benchmarking is an educational tool intended to facilitate a better understanding of energy saving priorities. As such, there are no direct cost savings from the benchmarking so the NHPUC cost effectiveness spreadsheet was not used for this proposal.

4.4 Promote market transformation: The Project can have a dramatic effect on transforming the view of school administrators and teachers on the impact of their building's energy use and carbon emissions by publically highlighting best performers and poor performers and by encouraging the setting of individual building energy Performance Targets based on building and state data. The Project has also be very effective in directing districts to utility energy efficiency programs so that they take full advantage of the efficiency funds available through the utility programs RGGI funded efforts, and other federal and state funding to improve energy efficiency.

4.7 Promote energy cost savings: The Project will provide districts with the information needed to take action on energy use reduction. The building report will demonstrate graphically how well or poorly the building is performing compared to like buildings AND, more important, recommend actions to be taken and direction to those who can help!

4.8 Leverage funds or resources from other sources to maximize its impact; AND Promote collaboration and provide useful information for future program evaluation and improvement; The Project reports can be used to bring together partners to look at school energy efficiency strategies in a collaborative way. Furthermore, districts are encouraged to seek assistance from a variety of sources, helping to leverage financial opportunities. In a very efficient and effective manner, this Project will develop a database of energy consumption in schools that will be extremely useful to the NH Department of Education and other entities, laying the groundwork for real, verifiable energy savings in school buildings across the state.

AND Effectively measure and verify program performance against stated goals: When a school is benchmarked against other existing school buildings, the energy use reduction can be easily measured as data is added from the same school building each year. This will show multi-year trends and savings. Performance can then be measured exactly by comparing a number of school buildings throughout New Hampshire.

## **5.0 Measurement and Verification**

Since this program is primarily informational and has no stated direct savings associated with it, traditional measurement and verification procedures are impractical. As such, metrics have to be used and tracked which are unique to this type of project. Through our previous experience successfully administering this type of program, TRC has helped to develop a set of performance criteria that allow for goals to be set and tracked throughout the course of the contract.

The primary measurement criteria for a program of this type tend to focus largely on the characteristics of the end customers affected. These criteria can of course be adjusted to align with the goals and objectives of the NHPUC, but the statistics that are currently tracked through similar programs are categories such as:

- Number of districts served
- Number of individual schools served
- Total square feet of buildings served
- Number of students served
- Number of EPA building labels facilitated
- Number of EPA Leader Awards facilitated
- Number of case studies developed
- Number of partnerships formed with professional organizations
- Number of conferences attended and/or sponsored
- Number of personnel trained

Most of these categories are automatically tracked, summarized, and reported either monthly or quarterly through the BEPS system. Obviously, program goals for these categories would be determined ahead at the outset of the program based on desired levels of market penetration and total market analysis. Progress would then be regularly reported to NHPUC at required intervals using both numerical metrics and subjective task reports.

In addition to these program performance statistics, the BEPS system allows for tracking and reporting of energy use statistics and accomplishments of the participating schools. It has the capability of generating baselines and providing detailed data for the development of performance standards directly applicable to the K-12 schools sector. This type of data will also provide NHPUC with the capability to verify the impact of efficiency efforts in these types of buildings throughout the state.

## **6.0 Budget**

A detailed budget, broken down by labor hour and task is included in Attachment C. This budget illustrates the detailed apportionment of requested funding for Year 1 and Year 2 of the proposed New Hampshire Schools Benchmarking Project. Due to the nature of the Project, we believe that the funding will be expended on a somewhat consistent basis throughout each year so quarterly breakdowns are not included.

Over the past six years, TRC has invested substantial man-hours in the design and continuous improvement of its automated Benchmarking Energy Performance in Schools (BEPS) system. This system has been applied and proven on over 3,000 public and private K-12 schools in five states. TRC proposes to provide BEPS' full range of data acquisition, management, analysis, and reporting capabilities to New Hampshire for the customization cost noted under Task 1. TRC cannot associate an exact dollar amount for the development of this system but presents the six year investment in the system as an **In-Kind Contribution**.

As stated previously, one of the great strengths of this Project is the extent to which it **leverages existing funds and resources** from other sources to maximize its impact. Specifically, these are the currently offered utility programs and related services offered by the Jordan Institute. Moreover, this Project identifies and prioritizes the opportunities for addressing school facilities through possible Federal Stimulus funds and financing for part of the program costs.

As stated in Attachment C, TRC applies a fee of 15% on its labor rates. For this Project, we propose to have 5% of this profit be **contingent on program performance**. The proposed performance threshold is to serve at least 200 school buildings with the BEPS system over the two year Project period. Therefore, if the Project is awarded as proposed and TRC does not serve at least 200 school buildings with the BEPS system over the two year Project period, a fee of 10% will be applied to labor rates. If the Project is awarded as proposed and TRC serves 200 or more buildings with the BEPS system over the two year Project period, the full 15% will be applied to labor rates.

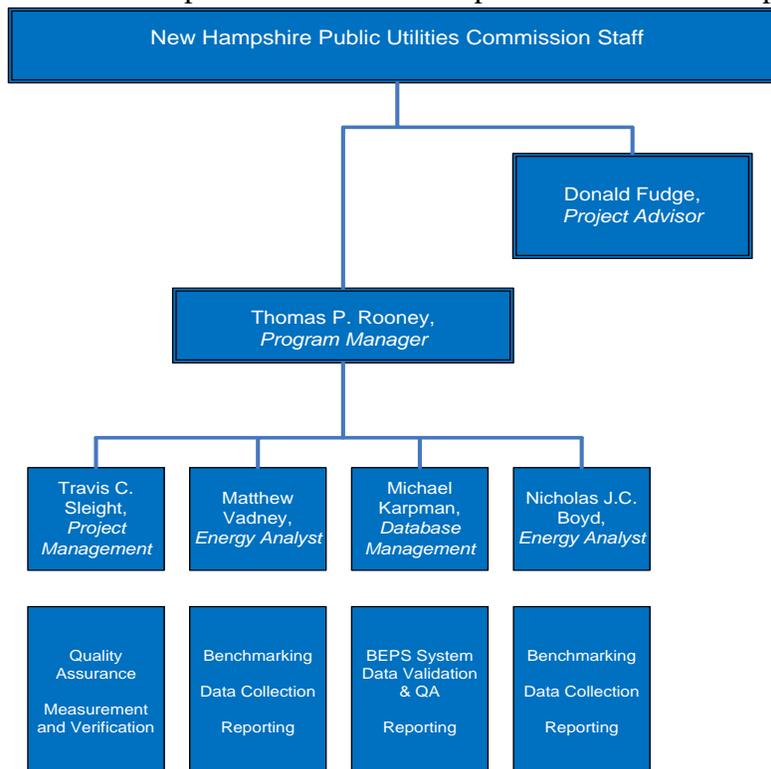
## 7) Applicant Qualifications

The TRC team includes nationally-recognized subject matter experts, and highly experienced program managers - including managers of two 2007 ACEEE Exemplary Program award winners. TRC's corporate organization provides substantial flexibility in absorbing different types of work without straining the capabilities of any one organization. We also have flexible agreements among the team members, which guarantee staff availability for critical areas, but still allow us to allocate each work element according to what is most effective for the needs of the project.

Mr. Donald Fudge, **Project Advisor**, has more than twenty years of experience working in schools and eleven years of experience consulting with schools. He has managed efforts for the Northeast High Performance Schools Exchange run by the Northeast Energy Efficiency Partnership (NEEP) and currently manages NYSERDA's high performance schools effort. He supports the NY High Performance Schools Guidelines (NY-CHPS) for NYSERDA and the NY State Education Department and is the leader of the NY-CHPS Verified Program Team, heading the NY-CHPS outreach effort.

Tom Rooney CEM, LEED® AP, **Program Manager**, has more than 20 years of experience designing, implementing, and evaluating energy efficiency programs. He currently serves as the Deputy Program Manager of NYSERDA's Multifamily Performance Program and supports the management and implementation of New Jersey's Clean Energy Programs. He has served as a technical consultant to the State of New Hampshire's Rebuild NH Program, including comprehensive energy studies for schools and ENERGY STAR® Benchmarking

All of the TRC team members listed in the org chart below will be available to interface with the NHPUC. The attached resumes provide detailed descriptions of the team's capabilities.



## 8) Additional Information

TRC staff were among the early consultants who helped EPA transition to an ENERGY STAR® Portfolio Manager benchmarking approach starting in 1999. TRC was then selected by NYSERDA to create and roll out the Energy Smart Schools Benchmarking Program in New York. We took the benchmarking approach several steps beyond the EPA benchmarking tool in creating the BEPS System. TRC has since been competitively selected by NYSERDA to expand its energy benchmarking services to include all state buildings in New York. TRC has also used its system to benchmark K-12 schools throughout Texas and Wisconsin. The BEPS database and tracking system was so successful at the state level that the EPA asked us not only to give them a demonstration of the tool, but also invited us to serve on a national advisory panel of energy experts to help EPA develop the next generation of benchmarking tools for America's schools. EPA went on to name TRC Energy Services as its 2008 ENERGY STAR Partner of the Year for outstanding energy management and reductions in greenhouse gas emissions.

### **NYSERDA's Energy Smart Schools Program**



TRC developed and implements NYSERDA's **Energy Smart Schools Program (ESS)**, which helps New York's 4,000 plus K-12 schools become more energy efficient. A cornerstone of ESS is a TRC-designed energy benchmarking system in which we use school energy and building data to perform a comparative state-wide analysis of seven key energy use and cost parameters such as energy intensity per student and per square foot. We have marketed and brought into the program approximately 25% of eligible New York State schools. Among the metrics we developed for each school is a benchmarking score derived from the web-based EPA ENERGY STAR® PORTFOLIO Manager Tool. A follow on to benchmarking

includes using the EPA Score to provide national-level recognition for high-performing schools and districts.

TRC has identified, applied for, and received EPA ENERGY STAR Leader recognition for seven school districts — 22% of all such awards granted by EPA nationwide. TRC has also identified, applied for, qualified, and received EPA ENERGY STAR Label recognition for 90 individual New York schools.

As a result of the Program efforts to date, the average energy use in New York State participating K-12 schools has decreased by more than 20%. TRC was recently selected to continue services to K-12 schools and has expanded the program to include similar and additional services for the 14,000 New York State-owned buildings. In 2007, the American Council for an Energy-Efficient Economy selected the "Energy Smart Schools Program" for national recognition as an "Exemplary Program."

### **Wisconsin Schools Benchmarking**

As part of a project with Wisconsin Focus on Energy, TRC provided benchmarking services and reporting for over 1200 Wisconsin K-12 schools. TRC was able to provide Focus on Energy with a state-wide analysis of key parameters such as heating fuel use per square foot, and electricity use per square foot. Furthermore, by using the EPA ENERGY STAR® PORTFOLIO Manager Tool, TRC identified those schools qualifying for an EPA ENERGY STAR Label and performed the EPA-required professional engineering validation for the Label schools.

**THOMAS P. ROONEY, CEM, LEED™ AP**

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**EDUCATION**

M.S., Environmental Studies, University of Massachusetts Lowell, 2001

B.S., Mathematics/Economics, University of New Hampshire, 1986

**PROFESSIONAL REGISTRATIONS/CERTIFICATIONS**

Certified Energy Manager (CEM)

Certified Measurement and Verification Professional (CMVP)

LEED™ Accredited Professional

**AREAS OF EXPERTISE**

Mr. Thomas P. Rooney, CEM, LEED™ AP has program management and technical experience in the following general areas:

- Energy Efficiency Program Design and Management
- Public Housing Authority (PHA) Energy Efficiency Projects
- Energy Auditing of Residential and Commercial Buildings
- Residential and Commercial Green Buildings
- Energy Efficiency Program Impact and Process Evaluations
- Energy Efficiency Technical Potential Studies

**REPRESENTATIVE EXPERIENCE**

Mr. Rooney, a Project Manager at TRC, has twenty years of experience in the energy industry with a primary focus on designing, implementing, and evaluating energy efficiency programs. His experience includes several years of energy efficiency project management for HUD-funded public housing authority properties. Mr. Rooney is involved in the program design of NYSERDA's Multifamily Building Performance Program along with supporting the management and implementation of New Jersey's Clean Energy Programs. During the past five years, Mr. Rooney has managed multiple projects concerning energy efficiency programs, including:

- Energy assessments of more than twenty commercial businesses, including multi-family building owners, hotels, and schools
- Managed Impact and Process Evaluation on several residential and commercial / industrial energy efficiency programs
- Conducted the Commercial and Industrial Sector components of several Energy Efficiency Technical Potential Studies, including preliminary program design
- Technical consultant to the State of New Hampshire's Rebuild NH Program, including comprehensive energy studies for schools and ENERGY STAR® Benchmarking
- Managed the New Hampshire Commercial Energy Code Training workshop series in 2004, 2005, and 2006
- Impact assessment of the Northeast Energy Efficiency Partnership's (NEEP) Building Operator Training (BOC) Program

- Conducted engineering reviews of NYSERDA's New York's Energy Smart™ Programs
- Assessment of NYSERDA's Standard Performance Contracting Program, including an assessment of performance contracting as an energy efficiency program model

**GDS Associates, Inc. – Senior Project Manager - 2000 to 2006**

Managed technical potential analyses, commercial energy assessments, logic model development, benefit/cost analysis of energy efficiency programs, program planning, analysis, implementation and evaluation of electric and gas energy efficiency programs and renewable energy programs, and other energy industry policy, regulatory and planning projects.

**EUA Citizens Conservation Services, Inc. – Project Manager – 1996 to 2000**

Managed the development and construction of energy and water saving performance contracts. Conducted extensive energy audits for public housing throughout the United States. Managed project measurement and verification and ongoing training services for Citizens' clients.

**U.S. Environmental Protection Agency – Technical Sales Manager – 1994 to 1996**

Developing a long term sales strategy for the ENERGY STAR Homes Program to meet goal of national market penetration of ten percent of all new homes by the year 2000. Developed a national ally network of utilities and building product manufacturers to further goals of ENERGY STAR Homes Program. Played an integral role in the design and development of the technical and administrative aspects of the ENERGY STAR Homes Program. Managed over \$2 million in related grants.

**Boston Edison Company – 1989 to 1994****Program Administrator - Demand Side Management (DSM)**

Managed residential DSM programs including: determining goals, developing budgets and RFPs, managing field staff and subcontractors, marketing, and developing business plans. Designed and developed a prescriptive residential DSM new construction program. Developed marketing strategy for the Energy Crafted Home (ECH) program, a performance-based residential new construction program.

**Technical Supervisor - Demand Side Management**

Responsible for managing field implementation of Energy Fitness Canvassing Program, which conducted door-to-door installations of energy efficient materials, including customer education, in over 20,000 low-income Boston Edison customers' homes.

**Research Analyst - Rate Department**

Responsible for conducting various power supply and demand side economic analysis projects.

**PROFESSIONAL AFFILIATIONS**

- Association of Energy Engineers
- Association of Energy Service Professionals

**SELECTED PUBLICATIONS AND PRESENTATIONS**

Rooney, T., Spellman, R., Burks, J., “Potential for Natural Gas Energy Savings in the Southwest”, Proceedings of the 2006 ACEEE Summer Study on Energy Efficiency in Buildings (August 2006).

Rooney, T., Spellman, R., Rufo, M., and Schlegel, J., “Estimating the Potential for Cost Effective Electric Energy and Peak Demand Savings in Connecticut”, Proceedings of the 2004 ACEEE Summer Study on Energy Efficiency in Buildings (August 2004).

Engel, V., Megdal, L., Rooney, T. Pakenas, L.J., and Soweck, S., “Quantifying Load-Shifting Benefits from an Advertising Campaign”, Proceedings of the 2003 International Energy Program Evaluation Conference (August 2003).

McCrae, M., Rooney, T., and Titus, E., “Education That Changes Behavior: The Impacts of the BOC Program”, Proceedings of the 2003 International Energy Program Evaluation Conference (August 2003).

Rooney, T., Albert, S., and Rutkowski, A., “Calling out the DOGS – Results and Development of the Distributed On-site Generation Screening (DOGS) Tool”, Proceedings of the 2003 ACEEE Summer Study on Energy Efficiency in Industry (July 2003).

Albert, S., Rooney, T., Pakenas, L.J., Ellefsen, J., and Kim H., “Solidifying the Foundation of Savings - A Review of NYSERDA's Methodology for Estimating Energy Benefits, One Kilowatthour at a Time”, Proceedings of the 2002 ACEEE Summer Study on Energy Efficiency in Buildings (August 2002).

Rooney, T., “Source Apportionment of Atmospheric Deposition of Polycyclic Aromatic Hydrocarbons at Massachusetts Bay Using the Chemical Mass Balance Model”, Masters of Science Thesis. University of Massachusetts Lowell (April 2001).

Bretz, S., Bloomfield, L., Rooney, T., and Kollar, J., “Marketing Energy Efficient Residential Construction Nationwide EPA's ENERGY STAR Homes Program”, Proceedings of the 1996 ACEEE Summer Study on Energy Efficiency in Buildings (August 1996).

**DONALD W. FUDGE**

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**EDUCATION**

M.A. History, Maxwell School of Syracuse University, Syracuse, NY, 1975

B.A. Architecture, Princeton University, Princeton, NJ, 1963

**PROFESSIONAL EXPERIENCE**

Mr. Donald Fudge has more than twenty years of experience working in schools and eleven years of experience consulting with schools. He has managed efforts for the Northeast High Performance Schools Exchange run by the Northeast Energy Efficiency Partnership (NEEP) and currently manages NYSERDA's high performance schools effort. He supports the NY High Performance Schools Guidelines (NY-CHPS) for NYSERDA and the NY State Education Department and is the leader of the NY-CHPS Verified Program Team, heading the NY-CHPS outreach effort.

**TRC Energy Services: Project Manager, Energy Smart Schools, 2007 – Present.**

Directs TRC Energy Services' public and private K-12 High Performance Schools activities across multiple states and jurisdictions. Responsible for marketing, outreach, training, and design criteria for both new construction and existing buildings.

**Northeast Energy Efficiency Partnerships, Inc. Lexington, MA: Director of Training and Education, 2005- 2007.**

Directed NEEP's training and education business planning and development, develops and maintains strategic relationships for training and education, supervised training and education staff and project teams, budgets and reporting, and directed product development, delivery and evaluation. NEEP Training and Education included the Building Operations and Maintenance Training Program, the Northeast Regional Building Energy Codes Project and the High Performance Schools Exchange.

**Program Manager, High Performance Schools Exchange, 2004- 2007.**

Managed the Exchange that advances high performance design principles in the design and construction of new and renovated K-12 schools in the Northeast states. Provided technical assistance and support to state high performance school working groups and organizations, developed and disseminated HPSE information through workshop presentations and Exchange *Briefings* (newsletter), developed relationships with key high performance schools stakeholders, managed an annual budget and project deliverables for the HPSE and wrote successful grant applications to support and advance the objectives of the High Performance Schools Exchange.

**Independent Consultant, 2002- 2004**

Consultant to Handleton Management Services Trust for humanitarian/educational projects. Specifically, developed The Global Education Foundation and researched and evaluated organizations for possible funding support.

**Head of School, Aiken Preparatory School, Aiken, South Carolina, 1999-2002**

Convinced the Board and a major contributor to use "sustainable school" design principles for a proposed new campus. Worked with Innovative Design, Inc. to design a campus to be energy-

efficient and to serve as a classroom for our students. Design included using daylighting principles in classrooms to reduce electrical energy costs, the collection of water from the roof to be stored in a cistern and used for irrigation of fields as well as in the flushing of toilets (the collection system to be open to observation by students), the use of recycled and non-toxic materials, and the use of solar panels for power in an environmental science lab. The campus was designed to be a regional, if not international, model of the sustainable school concept. Designed and made presentations on the campus to parents, alumni and the Aiken community.

**Consultant, DWFudge Consulting, Wilmington, DE, 1996-1999.**

Provided consulting services to private and independent schools: Head Search, strategic planning, curriculum planning, facilities planning, trustee training/orientation, administration team building, faculty workshops, marketing studies and consulting, campaign consulting and ongoing Head of School “coaching”; presented at national workshop on campus planning for private-independent schools.

**Senior Consultant, Independent School Management, Inc., Wilmington, DE 1988-1996.**

Consultant to private-independent schools in all areas of management with specialties in marketing and facilities planning; researched and wrote articles for *Ideas and Perspectives*; trained and mentored new consultants; designed, developed and taught one-day workshops; designed and taught three, five and six day school-year and Summer Institute Workshops; made presentations to groups of educators.

**Owner/Operator, Display Concepts, Kansas City, MO, 1987-1988**

Owned and operated a small manufacturing business in Kansas City, Missouri

**Director of Development, The Barstow School, Kansas City, MO, 1986-1987**

**Head of School, The Colorado Springs School, Colorado Springs, CO 1983-1986**

**Head of School, Gould Academy, Bethel, ME, 1977-1983.**

During the energy crisis of the late 1970s, improved heating plant efficiency and generated a 50% reduction in fuel costs; researched the installation of a wood-burning furnace.

Taught middle and upper school math and history and coached at Tabor Academy, Manlius Pebble Hill School (Head of Middle School, Upper School Dean) and Woodmere Academy (Head of Upper School, college counselor) and coached football and lacrosse at Princeton University (1969-70) and Colgate University (1972-75)

**SELECTED PUBLICATIONS AND PRESENTATIONS**

*Building the High Performance School*, New England Sustainable Energy Association, Conference, 2005

*Responding to the Energy Crunch While improving Student Learning*, New England School Development Council, Facilities Management Conference, 2005

*Saving Energy while Improving Student Learning: High Performance Schools*, District of Columbia Healthy Schools Network, 2005

*School Operations and Maintenance: Controlling Energy Costs while Improving Learning*, TriState Association of School Business Officials Summer Conference, 2005

*Creating Demand for Above Code Design*, Department of Energy National Workshop on State Building Energy Codes, 2005

*Energy and Resource Efficient Green Buildings*, Wheaton College Freshman Seminar, 2005

*Ensuring High Performance: The Facility Manager's Role in School Construction*, Council of Educational Facilities Planners International High Performance Schools Symposium, 2006

*Capital and Operating Budgets: Funding High Performance Schools*, Vermont High Performance Schools Initiative Summit, 2006

**TRAVIS C. SLEIGHT**

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**EDUCATION**

B.S., Interdisciplinary Engineering & Management, Clarkson University, 2004

**AREAS OF EXPERTISE**

Mr. Travis C Sleight has management and technical experience in the following general areas:

- Energy Program Consulting
- Sales and Applications Engineering
- Quality Verification Process Development
- Engineering Design Process Management
- Food Service Management
- Cable Television & High Speed Data Contracting

**REPRESENTATIVE EXPERIENCE**

Mr. Sleight has been a successful employee of an industry leading manufacturer of pneumatic components in the sales and applications field. He has provided support to customers in the field as well as company management. His responsibilities have included, customer support and training, product specification, data analysis, and new business development. Mr. Sleight also has a management background in the food service industry, entrepreneurial experience in cable installation and laboring, and residential construction experience. Through these various tasks he has demonstrated various skills in the usage of Microsoft Office applications as well as limited experience in AutoCAD design and various graphics programs.

**TRC Energy Services, Clifton Park Office-NY (Energy Engineer: 2007-Present)**

As an energy engineer, Mr. Sleight has been a consultant to the New York State Energy Research and Development Authority, working primarily on their Energy Smart Focus program. Mr. Sleight has developed and performed benchmarking and analysis services for numerous K-12 school districts and state agencies including a number of EPA Energy Star Labeled Building and Leaders award recipients. Mr. Sleight has also performed consulting work on a number of different marketing, outreach, training, and on-site support services within the Energy Smart Focus program.

**SMC Corporation of America, Rochester Sales Branch-NY (Applications/Sales Engineer: 2005-2007)**

Assisted customers in designing automation equipment and selection of appropriate products to fit engineering specifications and meet budget expectations. Evaluated customer potential, and performed market research to locate new business. Mr. Sleight also assisted regional sales branch manager with tasks such as organization of lead follow up, staging of product promotions, compilation of sales numbers for strategic analysis, and development of action plans. Responsible for maintaining current and developing new business at assigned accounts and driving specification of SMC products from end customer to suppliers and machine builders.

**SMC Corporation of America, Portsmouth RDC-NH (Quality Verification Process Engineer: 2005)**

Mr. Sleight was the manager of regional quality and claims processing for the world's largest manufacturer of pneumatic automation products as part of their sales training program. He was responsible for developing and carrying out test procedures on key products for specific top-level customers. To accomplish this, he created a running database of product tests and results which aided in identifying and correcting recurring quality issues. Mr. Sleight also processed, evaluated, and in some cases repaired customer returns.

**Clarkson University-NY, Introduction to Engineering Design Project (Student: 2003-2004)**

Mr. Sleight was a member of a design partnership that successfully completed 2 separate design and construct projects from inception to delivery including design, modeling, and testing phases.

**Entrepreneurial-NY (Cable Installation Contractor, Laborer, Handyman: 2001, 2002, 2004)**

Mr. Sleight contracted to do field installations for Time Warner Cable through Collins Cable and Electric. He installed digital television receivers, high speed data modems, and wireless networking for personal computers. He networked to procure odd jobs including fencing installation, landscape design and construction, and residential siding installation. In addition he was a member of a 5 person residential construction crew that specialized in the framing of new houses.

**Accomplishments and Certifications**

- Certified Pneumatic Specialist (CFPPS), International Fluid Power Society, 2007
- Private Pilot, Federal Aviation Administration, 2004

**NICHOLAS J.C. BOYD**

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**EDUCATION**

B.A., Economics, Tufts University, 2006

B.A., Political Science, Tufts University, 2006

**AREAS OF EXPERTISE**

Mr. Boyd has experience in the following general areas:

- Building Energy Efficiency Benchmarking
- MS Access & Excel database management
- Website/web application development and graphics design
- NIMS and ICS training
- Emergency Management, Response, and Continuity of Operations Planning
- HSEEP-compliant exercise preparation and evaluation
- Bridge, tunnel, and building security surveys
- Homeland Security CFATS Regulations
- DHS Constellation/ACAMS System

**REPRESENTATIVE EXPERIENCE**

As an Energy Analyst at TRC, Mr. Boyd is involved in the data collection, entry and analysis of building data for benchmarking purposes. He has experience in database design and management. Mr. Boyd has also researched, reviewed, and analyzed Homeland Security anti-terrorism regulations for chemical facilities, particularly their applicability to the Biotech industry. Mr. Boyd has prepared, evaluated, and facilitated emergency preparedness exercises in the public health and transportation sectors. Mr. Boyd has further used, analyzed and helped maintain advanced database utilities for energy efficiency programs in New York and New Jersey. Mr. Boyd has also developed and supported websites and web-applications in support of a variety of projects.

**New York State Energy Research and Development Authority (NYSERDA), Energy Benchmarking – NY (Energy Analyst)**

Mr. Boyd manages the data collection, entry, and analysis elements of NYSERDA's schools and state buildings energy efficiency benchmarking program. The effort has provided comparative energy performance benchmarking analysis and energy efficiency recommendations to over 600 NY schools since 2003. Mr. Boyd uses MS Excel, MS Access, MS Word, and custom-designed macros created from Visual Basic programming, in combination with analysis tools such as the on-line EPA ENERGY STAR<sup>®</sup> Portfolio Manager Benchmarking Tool, to perform the analysis. Mr. Boyd produces customized reports for clients containing the benchmarking results, and recommended operational and capital-intensive actions that clients can take to reduce energy use and costs. Most recently, Mr. Boyd has overseen the development and supported the roll-out of an advanced web-based application interface for the program.

**New Jersey SmartStart Program – NJ (Energy Analyst)**

Mr. Boyd assists in data organization, database design, and report compilation for this state energy efficiency incentive program. In addition to working to improve the program database's user friendliness and retrieving data for reports, Mr. Boyd has also used tools to produce maps geographically displaying state-wide program enrollment by ZIP code.

**Pioneer Valley Planning Commission (PVPC), Emergency Operations Plan Exercises – MA**

Mr. Boyd assisted in the preparation and execution of an HSEEP-compliant tabletop exercise to assess public health emergency response, communication, and coordination between 19 towns and cities in Western Massachusetts. Mr. Boyd evaluated the exercise players, including representatives of most of the 19 towns. Ultimately contributing to the exercise After-Action Report, Mr. Boyd also helped edit and finalize each town's Emergency Operations Plan.

**Massachusetts Turnpike Authority (MTA), Homeland Security Planning – MA**

Mr. Boyd helped the Authority revise and expand their mitigation plan, by incorporating additional assets, new protective actions, and additional detail. As part of this process, Mr. Boyd used the Constellation/ACAMS systems to list the Authority's assets, which also involved surveying and auditing these assets.

Mr. Boyd also helped prepare and set up an HSEEP-compliant multiple-scenario tabletop exercise to assess emergency response collaboration and communication between the MTA and the Massachusetts Bay Transportation Authority (MBTA). Mr. Boyd evaluated the exercise players and their actions against the goals and requirements of a newly drafted Memorandum of Understanding between the two agencies, ultimately contributing to the exercise After-Action Report.

Mr. Boyd also supported an MTA multi-location notification and communications drill whose participants included the major Boston emergency response agencies, the FBI, and the Massachusetts State Police. In addition to preparing the exercise, Mr. Boyd served as an evaluator and facilitator at one of the three drill locations.

**Massachusetts Bay Transportation Authority (MBTA), Redundant Operations Control Center and Secure Stations Initiative – MA**

Mr. Boyd has assisted in the providing accurate cost estimates, researching training requirements, organizing and reviewing drawings, assisting in project coordination and progress meetings, as well as creating documents and presentations to support the project at various stages.

**CERTIFICATIONS**

- FEMA National Incident Management System (IS100, IS200, IS700, IS800)
- FEMA Professional Development Series (IS139, IS230, IS235, IS240, IS241, IS242, IS244)
- FEMA Emergency Management Institute (IS3, IS5A)

**MATTHEW VADNEY**

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**EDUCATION**

B.A., Economics, State University of New York at Albany, 2007

**AREAS OF EXPERTISE**

Mr. Vadney has experience in the following general areas:

- School Building Benchmarking
- Data Collection and Analysis
- EPA Energy Star Portfolio Manager
- Quality Control and Reporting
- Database Management

**REPRESENTATIVE EXPERIENCE****NYSERDA's New York Energy Smart Focus Program (Energy Analyst)**

Through the K-12 schools Benchmarking Program, Mr. Vadney manages all incoming benchmarking requests from school districts, and serves as their primary contact for all benchmarking services. He conducts all benchmarking data organization and entry into both the national EPA ENERGY STAR Portfolio Manager database along with TRC's Microsoft Access Database comprised solely of New York K-12 schools. Mr. Vadney creates and analyzes all benchmarking reports to ensure accuracy and quality of the information contained within.

He continues to work with districts after the benchmarking reports have been finalized and received by the district in order to:

- Explain the contents of the reports to ensure understanding
- Facilitate appropriate follow-up actions with the district so that a higher level of energy efficiency may be achieved
- Apply for Building Label/District Leader Awards with EPA ENERGY STAR for recognition of top performing buildings/districts.

**State Building Analysis (Energy Analyst)**

Mr. Vadney has preformed data analysis on state buildings such as NYSERDA Headquarters and the NYS Department of Health office building in Troy, NY.

**United Parcel Service, Part-Time Supervisor, 2005-06**

- Responsible for the work of 8-10 employees; aspects include: organizing and motivating loaders to keep up with flow of packages, ensuring proper package handling, and maintaining on-time truck departures
- Stabilized Training Department during period of transition
- Achieved highest marks on all training related evaluations

**MICHAEL KARPMAN**

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**AREAS OF EXPERTISE**

- Energy Analysis
- Energy Modeling
- Database Management
- Information Technology

**REPRESENTATIVE EXPERIENCE**

- Energy Modeling: Modeling building energy usage in industry standard simulation tools including eQUEST. Buildings include multifamily buildings, day cares, auditoriums, schools, etc.
- LEED Certification: Applying the LEED Green Building Rating System to gain LEED Certification, including Energy and Atmosphere Credit 1.
- Statistical Analysis: Developed tool to normalize energy model output to actual weather in order to make meaningful comparison to available billing data and to calibrate energy models.
- In-house IT: Developed tracking database to track company income, expenses, HR (employee hours, vacation time, payment), and for project management purposes. In-house network administration.
- Database development and maintenance: Development and maintenance of database to manage all of NJ's Commercial and Industrial Clean Energy Programs, including documentation and technical support. Database manages multi-million dollar pipeline including project racking and billing.
- eQUEST Training: Assisted in creating curriculum and presenting popular eQUEST Energy Modeling Training Seminar. Performed online marketing and advertising to generate interest.

**Achievements**

- Co-chair of the IBPSA-NYC Energy Modeling Technical Committee
- Led implementation and assisted with design of tracking database incentive program with multi-million annual budget. Database capabilities include tracking general project data, performance metrics, running invoices, and reporting.
- Assistant presenter in popular eQUEST Energy Modeling Training



Updated  
Energy Benchmarking Report  
For  
Sample Central School  
Sample Town, NY

(for the period: August 2003 through July 2006)

Prepared by:



## **Background & Findings**

The New York State Energy Research and Development Authority (NYSERDA) developed the *Energy Smart Schools Program* to support New York State K-12 public and private schools in the pursuit of energy efficiency and sustainability. The analysis provided by the *Energy Smart Schools Program* is designed to help your school in three ways:

- Understand the energy consumption and cost trends at each of your buildings,
- See how your buildings are doing compared to other schools locally and nationally, and
- Identify opportunities for improving operations and reducing costs.

The analysis is based on the description of your school that you provided — size, number of students, types of heating & cooling, cooking facilities, number of PCs, etc. Your school's utility bills were also used to assess its electricity and heating fuel consumption for the year(s) provided. A summary table of your school building's, use, and cost information is provided on the following page.

Your building's performance is then compared against two different sets of school energy data: U.S. EPA's national data; and NYSERDA's New York State specific data. The results are illustrated in a graph on the following page for each year provided. The seven major *Energy Smart Schools Benchmarks* represented include: U.S. EPA Score, total energy use, electricity use, heating fuel use, and total cost, all of which have been normalized for comparison by either square footage or number of students. These benchmarks are further explained in the rest of the report.

An additional page of graphs tracks your school's monthly electricity use, electricity demand, and heating fuel use figures. Although the monthly usage graphs do not include comparisons with other schools in New York or nationwide, they give you a clear picture of how your school building consumes energy over the course of a year. Monthly figures also tend to be useful for anyone who is interested in performing an onsite energy audit.

As part of the Program's focus on sustainability, your school's carbon footprint is also presented.

On the last page we have included some recommended next steps and a discussion of the applicable NYSERDA programs available to support you, including programs for onsite energy audits.

### Sample Central School Building Summary

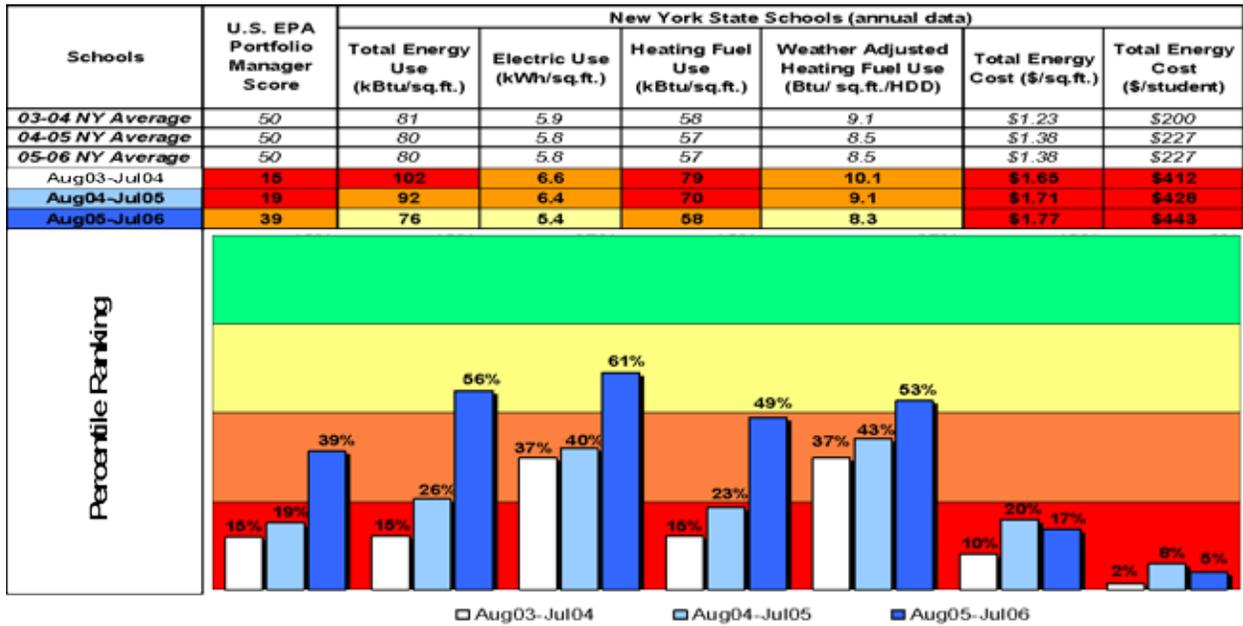
Building Data			
District	Sample District	School Name	Sample CS
City	Sample Town	Zip Code	12345
Year Built	1957	Floor Area (sq.ft.)	100,000
Number of Students	400	Number of PCs	250
Weekly Operating Hours	60	Months School Used	10
Cooking?	YES	% AC	5
Pool Size?	N/A	Months Pool Used	N/A

Utility Data			
Data End Point	7/31/2006	Total Cost (\$)	177,237
Electricity Usage (kWh)	541,200	Electricity Cost (\$)	92,574
Natural Gas Usage (therms)	0	Natural Gas Cost (\$)	0
Fuel Oil Usage (gal)	31,567	Fuel Oil Cost (\$)	61,602
Other Fuel Usage (gal)	10,419	Other Fuel Cost (\$)	23,061

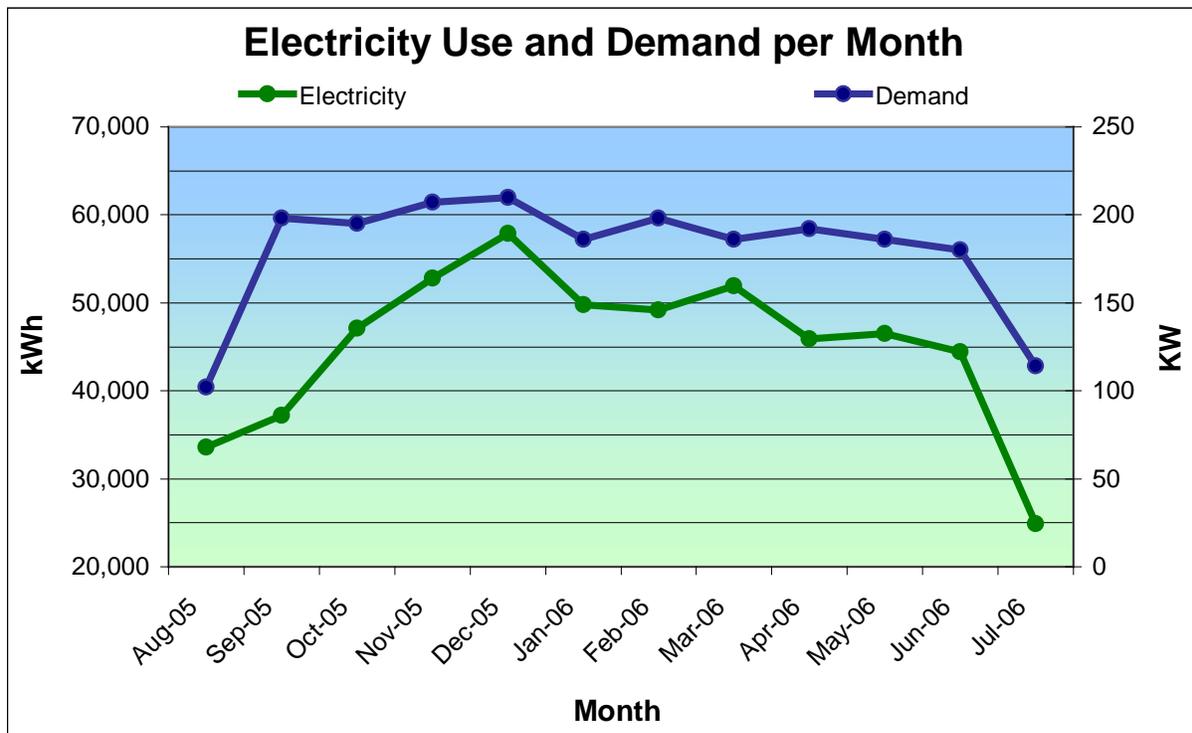
Energy Indicators			
EPA Score	39	Electric Usage (kWh/sq.ft.)	5.4
Heating Fuel Usage (kBtu/sq.ft.)	58	Weather Adjusted Heating Usage (Btu/sq.ft./HDD)	8.3
Site Energy (kBtu/sq.ft.)	76	Source Energy (kBtu/sq.ft.)	113

Environmental Impact Indicators			
Carbon Emissions			
Last Year Heating Fuel CO <sub>2</sub> (tons)	181	Last Year Total CO <sub>2</sub> (tons)	1078
Last Year Electricity CO <sub>2</sub> (tons)	897	CO <sub>2</sub> Efficiency Savings Over Previous Year (tons)	78
EPA Target Score			
Target Score	75	Site Energy Reduction Needed (kBtu/sq.ft.)	24.1

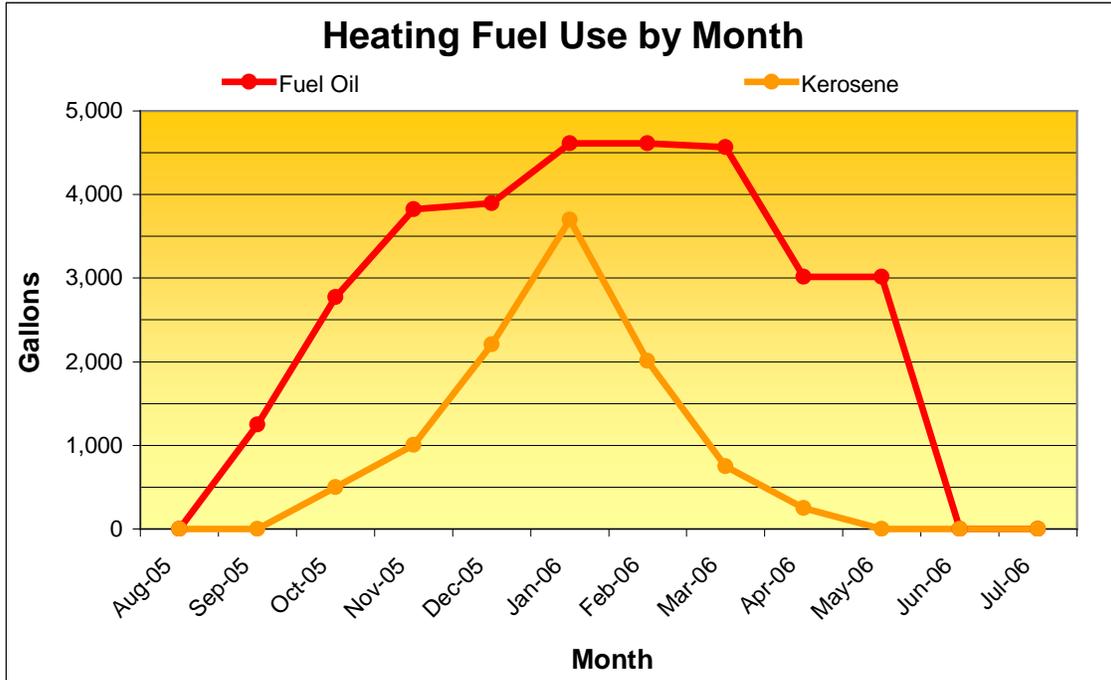
**Sample Central School Energy Smart Schools Benchmarks**



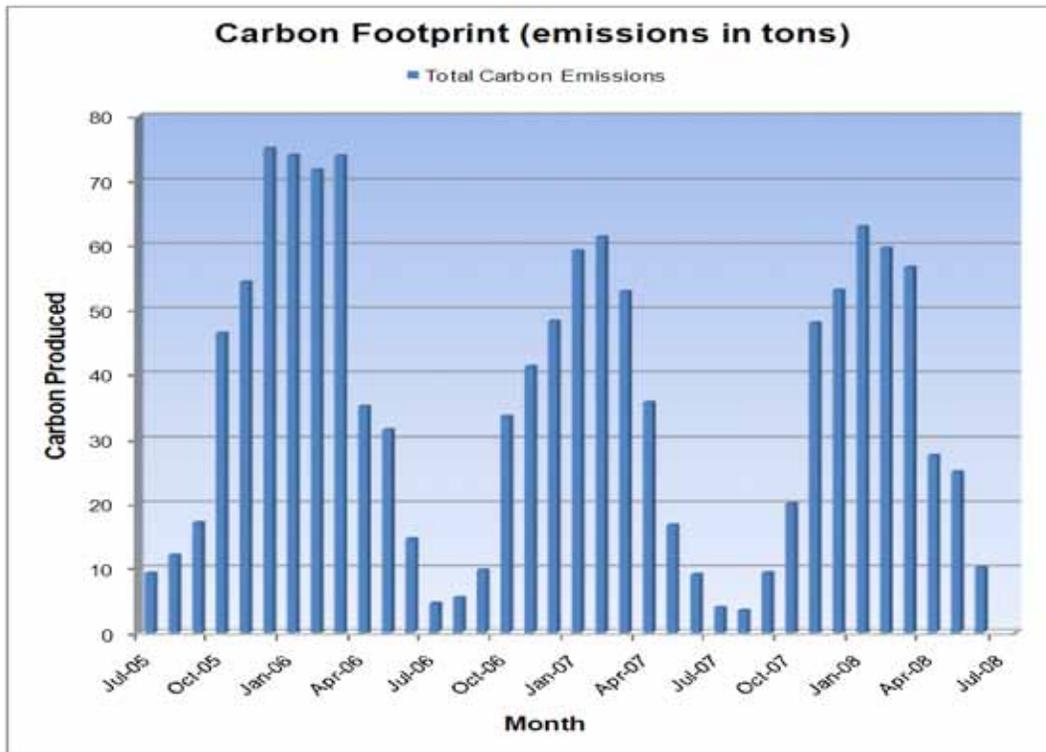
**Sample Central School Monthly Electricity Use & Demand**



**Sample Central School Monthly Heating Fuel Use**



**Sample Central School Carbon Emissions**



### **U.S. EPA Portfolio Manager Score**

*Portfolio Manager* is a benchmarking model based on a national set of data from K-12 schools. It is provided by the U.S. Environmental Protection Agency’s ENERGY STAR® Program. The impact of factors outside of your control (such as location, occupancy, and operating hours) are removed, providing a 1-100 ranking of a school’s energy performance relative to the national school building market. A score of 50 represents the national average, and a score of 100 is best. Schools that achieve a score of 75 or higher are eligible for EPA’s ENERGY STAR® Building Label, the national symbol for protecting the environment through energy efficiency. Districts can achieve ENERGY STAR® Leader Awards in recognition if their buildings, on average, improve by 10 or more points from one year to the next.

Congratulations, this year’s *Portfolio Manager* Score of 39 is 20 points higher than last year and 24 points higher than two years ago.

### **New York State Schools (Annual Data)**

The second data set is made up solely of New York State K-12 schools for which NYSERDA has obtained building characteristics and at least one-year of energy consumption data. Within this data set, your school’s annual energy use is compared with others based on the four main categories listed below. These comparisons allow you to see how your building is doing relative to other buildings designed and constructed to the same New York State codes standards, operating under the same New York State Education Department regulations and schedules, and operating under similar weather conditions — in other words, ‘apples-to-apples.’ The indicators are calculated on a *per square foot* or *per student* basis, so you can compare your school to different sized schools.

#### **Total energy use — New York State Average: 80 kBtu/sq.ft.**

This indicator shows how much total energy, heating, cooling (if any), lights, cooking, computers, etc. your school consumes each year.

Your school’s most recent year’s total energy use of 76 kBtu per square foot per year is slightly better than average for New York State K-12 schools. This figure is 17% lower than last year and 25% lower than it was two years ago.

This is a good indicator of how well, overall, your school is performing. However, it doesn’t help you find **where** in your building to look for improvement opportunities. The multiple factors below can help with that.

#### **Electric use — New York State Average: 5.8 kWh/sq.ft.**

When looking solely at electric consumption, you eliminate the effects of your heating plant. You’re now seeing how well the building does with its lights, cooling and cafeteria systems (if any), and what’s referred to as “plug load.” Plug load is just that, anything that plugs into a socket. In schools, the major plug loads are generally computers (including monitors, printers and copiers), refrigerators, coffee machines, fans, shop equipment, and projectors. If electric consumption is much higher than average, but heating fuel use (see below) is average or better, then you can focus your efforts on the electric-powered elements listed above.

Your school's electric consumption of 5.4 kWh per square foot this year is lower than 61% of New York State schools and is 16% lower than it was last year.

**Electric Demand — New York State Average: 2.0 kW/sq.ft.**

Most electric utilities use two factors to determine what your bill will be. The first factor, discussed above, is the building's usage in kilowatt hours. The second factor is known as demand expressed in kilowatts. Demand is the maximum amount of draw that your building places on the grid. To give an analogy; if electricity usage is the amount of water going through a hose in gallons, electric demand would be how fast that water flows expressed in gallons per minute. An electric utility generally measures demand by adding up the kW draw that your building places on the electric grid for a 15 minute period. Whichever 15 minute period during your monthly billing cycle places the highest kW demand on the grid will be the demand factor applied to your bill. The best way to improve this demand factor is to stagger the times when your electrical systems draw at their maximum or reduce unnecessary electric load altogether.

Your school's electric demand of 1.72 kW/sq.ft. is lower than 76% of New York State Schools.

**Heating fuel use — New York State Average: 57 kBtu/sq.ft. or 8.5 Btu/sq.ft./HDD**

Reviewing these indicators is relatively straightforward. If your school's heating fuel use is much higher than average, an audit of your heating system along with your building envelope — doors, windows, roof — is recommended. This factor is 'fuel-neutral.' That is, it works for either fuel oil or natural gas heating systems.

Your school's heating fuel use of 58 kBtu per square foot this year is average for New York schools. This year's heating fuel use is 17% lower than it was during the 2004-2005 school year and 27% lower than during the 2003-2004 school year. Your school's weather adjusted heating fuel use of 8.3 Btu per square foot per total annual heating degree days this year is also about average for New York schools. This figure is 9% lower than last year and 18% lower than it was two years ago.

**Energy cost — New York State Averages: \$1.38/sq.ft. and \$227/student**

Cost is the bottom line. These numbers help you understand how much — in terms of budget — that you have to gain through energy efficiency improvements.

This year's energy cost of \$1.77 per square foot ranks among the bottom fifth of New York schools. Furthermore this year's cost expressed on a per student basis of \$443 is higher than 95% of New York schools. However, your school's low student density per square foot — approximately just two thirds of the state average — is largely responsible for your high student cost figure. Due to the building's reduced energy consumption, your school has maintained a spending increase of less than 10% over the course of the past three years despite extreme increases in the price of electricity and heating fuels.

**Recommendations**

As you know, energy efficiency is becoming an increasingly large concern in schools as utility prices continue to rise. Since the inception of the Energy Smart Schools Benchmarking Program

in 2003, the price of natural gas has increased by 123%, the price of fuel oil has increased by 107%, and the price of electricity has increased by 32%. NYSERDA's programs are designed to help New York State tackle these issues with financial and personal support. Accordingly, schools that have participated in NYSERDA's Energy Benchmarking Program have shown a decrease in overall energy use of approximately 22%. We hope the following recommendations will help you reduce your energy consumption as well.

A 25% total energy use reduction confirms that Sample CS is moving in the right direction. Your consumption figures are about average for New York State. These **indicators** should be helpful in making informed decisions on how to proceed with improvements to your building(s). Nevertheless, remote benchmarking analysis is not a substitute for on-site, building energy auditing. Furthermore, if you could reduce your total energy use by an additional 10%, you could save up to *\$20,000 more each year*. Several NYSERDA programs available to support your efforts, including energy audits, are described on the following page. Please call us at 1-877-442-9181 to find out how these programs can help you save money and improve school conditions.

TRC Team Staff	Project Role	Base Rate	Overhead	Fee*	Total Billing Rate - Year 1	Total Billing Rate - Year 2
Donald Fudge	Project Advisor	\$ 32.60	174.68	15%	\$ 102.98	\$ 108.13
Tom Rooney	Program Manager	\$ 64.37	174.68	15%	\$ 203.33	\$ 213.50
Travis Sleight	Project Manager	\$ 27.37	174.68	15%	\$ 86.46	\$ 90.78
Nicholas Boyd	Energy Analyst	\$ 21.63	174.68	15%	\$ 68.33	\$ 71.75
Mathew Vadney	Energy Analyst	\$ 18.27	174.68	15%	\$ 57.71	\$ 60.60
<b>Karpman Consulting</b>						
Michael Karpman	Database Management				\$ 61.00	\$ 64.05

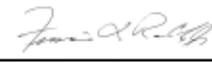
\* The proposed fee is contingent on Program Performance as stated in Section 6 of the Proposal.  
 TRC's Year 1 rates are in effect through September 1, 2009  
 Thereafter, these rates are subject to annual review and increases up to 5% per year



Budget Summary YR1			Task 1	Task 2	Task 3	Task 4	Task 5	
Staff	Classification	Rate	Adapt BEPS to NH	Marketing and Outreach	Benchmarking	EPA/Energy Star	Reports	Total Hours
Donald Fudge	Project Advisor	\$ 102.98	0	96	12	0	12	120
Tom Rooney	Program Manager	\$ 203.33	6	60	72	0	19	157
Travis Sleight	Project Manager	\$ 86.46	12	90	145	0	100	347
Nicholas Boyd	Energy Analyst	\$ 68.33	0	0	291	49	0	340
Mathew Vadney	Energy Analyst	\$ 57.71	0	96	275	166	0	537
<b>Subtotal</b>			<b>18</b>	<b>342</b>	<b>795</b>	<b>215</b>	<b>131</b>	<b>1,501</b>
<b>Karpman Consulting</b>								
Michael Karpman	Database Management	\$ 61.00	195	0	0	0	0	195
<b>Subconsultant subtotal</b>			<b>195</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>
<b>Total Hours</b>			<b>213</b>	<b>342</b>	<b>795</b>	<b>215</b>	<b>131</b>	<b>1,696</b>
<b>ODCs (in \$\$\$)</b>								
	Travel		\$0	\$5,000	\$0	\$0	\$0	\$ 5,000
	Hosting		\$0	\$0	\$0	\$0	\$0	\$ -
<b>Subtotals</b>								<b>\$0</b>

Budget Summary YR1								
Staff	Project Role	Rate	Task 1 Adapt BEPS to NH	Task 2 Marketing and Outreach	Task 3 Benchmarking	Task 4 EPA/Energy Star	Task 5 Reports	Totals
Donald Fudge	Project Advisor	\$ 103	\$ -	\$ 9,886	\$ 1,236	\$ -	\$ 1,236	\$ 12,358
Tom Rooney	Program Manager	\$ 203	\$ 1,220	\$ 12,200	\$ 14,640	\$ -	\$ 3,863	\$ 31,923
Travis Sleight	Project Manager	\$ 86	\$ 2,440	\$ 18,300	\$ 29,483	\$ -	\$ 20,333	\$ 70,556
Nicholas Boyd	Energy Analyst	\$ 68	\$ -	\$ -	\$ 19,884	\$ 3,348	\$ -	\$ 23,232
Mathew Vadney	Energy Analyst	\$ 58	\$ -	\$ 5,540	\$ 15,870	\$ 9,580	\$ -	\$ 30,990
<b>Subtotal</b>			<b>\$ 3,660</b>	<b>\$ 45,926</b>	<b>\$ 81,113</b>	<b>\$ 12,928</b>	<b>\$ 25,432</b>	<b>\$ 169,058</b>
<b>Subcontractors</b>								
Michael Karpman	Database Management	\$ 61	\$ 11,895	\$ -	\$ -	\$ -	\$ -	\$ 11,895
<b>Subtotal Subcontractors</b>			<b>\$ 11,895</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,895</b>
<b>ODCs</b>								
	Travel		\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000
	Other Direct Costs							\$ -
<b>Subtotal ODCs</b>			<b>\$ -</b>	<b>\$ 5,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,000</b>
<b>SUBTOTAL</b>			<b>\$ 15,555</b>	<b>\$ 50,926</b>	<b>\$ 81,113</b>	<b>\$ 12,928</b>	<b>\$ 25,432</b>	<b>\$ 185,953</b>
<b>G &amp; A 5.0%</b>	5%		\$ 778	\$ 2,546	\$ 4,056	\$ 646	\$ 1,272	\$ 9,298
<b>TOTAL COST OF TASKS - GHGER FUNDING</b>			<b>\$ 16,333</b>	<b>\$ 53,472</b>	<b>\$ 85,168</b>	<b>\$ 13,574</b>	<b>\$ 26,704</b>	<b>\$ 195,251</b>

This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.

**Typed Name and Title:** Francis X. Reilly, Jr., Vice President     
**Signature:**      
**Date:** 3/23/2009

Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months?  Yes  No    If yes, identify: US EPA and OSHA

As an In Kind contribution, TRC is providing its already-developed and proven Benchmarking Energy Performance in Schools (BEPS) system for this effort. See Proposal Section 6 for further discussion.



Budget Summary YR2			Task 1	Task 2	Task 3	Task 4	Task 5	
Staff	Classification	Rate	Adapt BEPS to NH	Marketing and Outreach	Benchmarking	EPA/Energy Star	Reports	Total Hours
Donald Fudge	Project Advisor	\$ 108.13	0	96	12	0	12	120
Tom Rooney	Program Manager	\$ 213.50	0	56	93	0	37	186
Travis Sleight	Project Manager	\$ 90.78	0	140	300	0	155	595
Nicholas Boyd	Energy Analyst	\$ 71.75	0	0	663	414	0	1,077
Mathew Vadney	Energy Analyst	\$ 60.60	0	0	486	146	0	632
<b>Subtotal</b>			<b>0</b>	<b>292</b>	<b>1,554</b>	<b>560</b>	<b>204</b>	<b>2,610</b>
<b>Karpman Consulting</b>								
Michael Karpman	Database Management	\$ 64.05	26	0	39	0	0	65
<b>Subconsultant subtotal</b>			<b>26</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>65</b>
<b>Total Hours</b>			<b>26</b>	<b>292</b>	<b>1,593</b>	<b>560</b>	<b>204</b>	<b>2,675</b>
<b>ODCs (in \$\$\$)</b>								
	Travel		\$0	\$5,000	\$0	\$0	\$0	\$ 5,000
	Hosting		\$0	\$0	\$0	\$0	\$0	\$ -
<b>Subtotals</b>								<b>\$0</b>

Budget Summary YR2								
Staff	Project Role	Rate	Task 1 Adapt BEPS to NH	Task 2 Marketing and Outreach	Task 3 Benchmarking	Task 4 EPA/Energy Star	Task 5 Reports	Totals
Donald Fudge	Project Advisor	\$ 103	\$ -	\$ 9,886	\$ 1,236	\$ -	\$ 1,236	\$ 12,358
Tom Rooney	Program Manager	\$ 203	\$ -	\$ 11,386	\$ 18,910	\$ -	\$ 7,523	\$ 37,819
Travis Sleight	Project Manager	\$ 86	\$ -	\$ 28,466	\$ 60,999	\$ -	\$ 31,516	\$ 120,981
Nicholas Boyd	Energy Analyst	\$ 68	\$ -	\$ -	\$ 45,303	\$ 28,289	\$ -	\$ 73,591
Mathew Vadney	Energy Analyst	\$ 58	\$ -	\$ -	\$ 28,047	\$ 8,426	\$ -	\$ 36,473
<b>Subtotal</b>			<b>\$ -</b>	<b>\$ 49,739</b>	<b>\$ 154,494</b>	<b>\$ 36,714</b>	<b>\$ 40,275</b>	<b>\$ 281,222</b>
<b>Subcontractors</b>								
Michael Karpman	Database Management	\$ 61	\$ 1,586	\$ -	\$ 2,379	\$ -	\$ -	\$ 3,965
<b>Subtotal Subcontractors</b>			<b>\$ 1,586</b>	<b>\$ -</b>	<b>\$ 2,379</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 3,965</b>
<b>ODCs</b>								
	Travel		\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000
	Other Direct Costs							\$ -
<b>Subtotal ODCs</b>			<b>\$ -</b>	<b>\$ 5,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,000</b>
<b>SUBTOTAL</b>			<b>\$ 1,586</b>	<b>\$ 54,739</b>	<b>\$ 156,873</b>	<b>\$ 36,714</b>	<b>\$ 40,275</b>	<b>\$ 290,187</b>
<b>G &amp; A 5.0%</b>	5%		\$ 79	\$ 2,737	\$ 7,844	\$ 1,836	\$ 2,014	\$ 14,509
<b>TOTAL COST OF TASKS - GHGER FUNDING</b>			<b>\$ 1,665</b>	<b>\$ 57,476</b>	<b>\$ 164,717</b>	<b>\$ 38,550</b>	<b>\$ 42,289</b>	<b>\$ 304,697</b>

This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.

<b>Typed Name and Title:</b> Francis X. Reilly, Jr., Vice President	<b>Signature:</b>	3/22/2009
Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, identify: US EPA and OSHA		
As an In Kind contribution, TRC is providing its already-developed and proven Benchmarking Energy Performance in Schools (BEPS) system for this effort. See Proposal Section 6 for further discussion.		

Budget Summary Total		Task 1	Task 2	Task 3	Task 4	Task 5	
Staff	Classification	Adapt BEPS to NH	Marketing and Outreach	Benchmarking	EPA/Energy Star	Reports	Total Hours
Donald Fudge	Project Advisor	0	192	24	0	24	240
Tom Rooney	Program Manager	6	116	165	0	56	343
Travis Sleight	Project Manager	12	230	445	0	250	937
Nicholas Boyd	Energy Analyst	0	0	954	463	0	1,417
Mathew Vadney	Energy Analyst	0	96	761	312	0	1,169
<b>Subtotal</b>		<b>18</b>	<b>634</b>	<b>2,349</b>	<b>775</b>	<b>330</b>	<b>4,106</b>
<b>Karpman Consulting</b>							
Michael Karpman	Database Management	221	0	39	0	0	260
<b>Subconsultant subtotal</b>		<b>221</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>260</b>
<b>Total Hours</b>		<b>239</b>	<b>634</b>	<b>2,388</b>	<b>775</b>	<b>330</b>	<b>4,366</b>

ODCs (in \$\$\$)							
	Travel	\$0	\$10,000	\$0	\$0	\$0	\$ 10,000
	Hosting	\$0	\$0	\$0	\$0	\$0	-
<b>Subtotals</b>							<b>\$0</b>

Budget Summary Years 1 and 2		Task 1	Task 2	Task 3	Task 4	Task 5	Totals
Staff	Project Role	Adapt BEPS to NH	Marketing and Outreach	Benchmarking	EPA/Energy Star	Reports	
Donald Fudge	Project Advisor	\$ -	\$ 19,772	\$ 2,472	\$ -	\$ 2,472	\$ 24,715
Tom Rooney	Program Manager	\$ 1,220	\$ 23,586	\$ 33,549	\$ -	\$ 11,386	\$ 69,742
Travis Sleight	Project Manager	\$ 2,440	\$ 46,766	\$ 90,482	\$ -	\$ 50,833	\$ 190,520
Nicholas Boyd	Energy Analyst	\$ -	\$ -	\$ 65,187	\$ 31,637	\$ -	\$ 96,824
Mathew Vadney	Energy Analyst	\$ -	\$ 5,540	\$ 43,917	\$ 18,006	\$ -	\$ 67,463
<b>Subtotal</b>		<b>\$ 3,660</b>	<b>\$ 95,665</b>	<b>\$ 235,607</b>	<b>\$ 49,642</b>	<b>\$ 64,691</b>	<b>\$ 449,264</b>
<b>Subcontractors</b>							
Michael Karpman	Database Management	\$ 13,481	\$ -	\$ 2,379	\$ -	\$ -	\$ 15,860
<b>Subtotal Subcontractors</b>		<b>\$ 13,481</b>	<b>\$ -</b>	<b>\$ 2,379</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 15,860</b>
<b>ODCs</b>	Travel	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000
	Other Direct Costs						\$ -
<b>Subtotal ODCs</b>		<b>\$ -</b>	<b>\$ 10,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 10,000</b>
<b>SUBTOTAL</b>		<b>\$ 17,141</b>	<b>\$ 105,665</b>	<b>\$ 237,986</b>	<b>\$ 49,642</b>	<b>\$ 64,691</b>	<b>\$ 475,124</b>
<b>G &amp; A 5.0%</b>	5%	\$ 857	\$ 5,283	\$ 11,899	\$ 2,482	\$ 3,235	\$ 23,756
<b>TOTAL COST OF TASKS - GHGER FUNDING</b>		<b>\$ 17,998</b>	<b>\$ 110,948</b>	<b>\$ 249,885</b>	<b>\$ 52,124</b>	<b>\$ 67,925</b>	<b>\$ 498,880</b>

*This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.*

Typed Name and Title: Francis X. Reilly, Jr.,  
 Vice President Signature:  3/23/2009

Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months?  Yes  No If yes, identify: US EPA and OSHA

**STATEMENT OF DIRECT LABOR,  
FRINGE BENEFITS & GENERAL OVERHEAD  
AND  
INDEPENDENT AUDITOR'S REPORT**

**TRC COMPANIES, INC.**

**June 30, 2008**

**MACCONEL & DODD, LLC**

*Certified Public Accounting Firm*

PO Box 698  
Cortez, FL 34215  
(941) 794-1608  
Fax: 794-1657

**MACCONEL & DODD, LLC***Certified Public Accounting Firm*PO Box 698  
Cortez, FL 34215  
(941) 794-1608  
Fax: 794-1657Maribeth MacConel  
CPA, CIA, CGFMDennis N. Dodd, Jr.  
CIA, CGFMIndependent Auditor's ReportBoard of Directors  
TRC Companies, Inc.  
Windsor, CT 06095

We have audited the accompanying Statement of Direct Labor, Fringe Benefits & General Overhead of TRC Companies, Inc. (the Company) for the year ended June 30, 2008. This statement is the responsibility of the Company's management. Our responsibility is to express an opinion on this statement based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Statement of Direct Labor, Fringe Benefits and General Overhead. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall statement presentation. We believe that our audit provides a reasonable basis for our opinion.

The accompanying statement was prepared on the basis of accounting practices prescribed by Part 31 of the Federal Acquisition Regulations and certain other Federal regulations as discussed in Note 3 and is not intended to be a presentation in conformity with generally accepted accounting principles.

In our opinion, the statement referred to above presents fairly, in all material respects, the direct labor, fringe benefits & general overhead of the Company for the year ended June 30, 2008, on the basis of accounting described in Note 3.

In accordance with *Government Auditing Standards* we have also issued a report dated December 18, 2008 on our consideration of the Company's internal control structure and on our tests of its compliance with certain laws, regulations and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audit.

This report is intended solely for the use of TRC Companies, Inc. and governmental agencies that use the cost principles of the Federal Acquisition Regulations and should not be used for any other purpose.

MACCONEL & DODD, LLC  
December 18, 2008

TRC COMPANIES, INC.  
**STATEMENT OF DIRECT LABOR, FRINGE BENEFITS & GENERAL OVERHEAD**  
 FOR THE YEAR ENDED JUNE 30, 2008

	Per <u>General Ledger</u>	Consultant <u>Adjustments</u>	Audit <u>Adjustments</u>	As <u>Adjusted</u>	Reference For <u>Unallowables</u>
<i>Direct Labor</i>	\$97,834,505	\$354,766		\$97,479,739	CAS 402
<i>Fringe Benefits</i>					
Payroll Taxes	12,708,667			12,708,667	
Paid Leave	15,170,859			15,170,859	
Workers Compensation	889,773			889,773	
Group Insurance	16,377,544			16,377,544	
Pension Expense	3,125,140			3,125,140	
<i>Total Fringe Benefits</i>	<u>48,271,983</u>			<u>48,271,983</u>	
<i>General Overhead</i>					
Indirect Labor	61,040,081		469,865	60,570,216	31.205-6; compensation
Accounting & Legal	12,018,575	3,813,394	8,460	8,196,721	31.205-3; bad debts 31.205-47; legal 31.202; direct
Advertising	243,285	243,267		18	31.205-1; advertising
Auto Expense	2,750,256	1,279,712	1,749	1,468,795	31.205-46; travel CAS 402
Bad Debts	9,455,526	9,455,526		0	31.205-3; bad debts
Bank Charges	1,205,930		193,043	1,012,887	31.205-20; interest
Consulting	3,140,966		30,000	3,110,966	31.202; direct
Depreciation	85,318,354	77,853,693		7,464,661	31.205-49; goodwill
Donations	76,841	76,841		0	31.205-8; contributions
Dues & Subscriptions	395,555			395,555	
Employee Education	115,060			115,060	
Employee Morale	713,963	713,963		0	31.205-14; entertainment 31.205-13; gifts 31.205-46; travel
Gain/Loss on Sale of Assets	457,036	457,036		0	31.205-16; gain/loss on asset
Entertainment	9,739	9,739		0	31.205-14; entertainment
Equipment Expense	2,787,913	-136,006	18,414	2,905,505	CAS 402 31.202; direct
Insurance	1,369,309			1,369,309	
Interest	-52,666	-52,666		0	31.205-20; interest
Other Expenses	2,299,915	445,517	79,165	1,775,233	31.205-1; public relations CAS 402 31.201-4; allocability 31.205-27; organization costs
Postage	855,870	162		855,708	31.202; direct
Recruiting	1,768,034			1,768,034	
Rent	15,354,516	2,456,497		12,898,019	31.205-27; organization costs
Repair & Maintenance	1,583,013	37		1,582,976	31.202; direct
Reproduction	1,206,328	399		1,205,929	CAS 402
Seminars & Meetings	838,814	332,618		506,196	31.205-14; entertainment
Supplies	2,582,633	11,562		2,571,071	31.202; direct
Taxes & Licenses	13,273,305	11,043,658		2,229,647	31.205-41; taxes
Telephone	4,035,385			4,035,385	
Temp Personnel	1,574,070			1,574,070	
Travel	3,672,930	214,716		3,458,214	31.205-14; entertainment 31.205-46; travel 31.205-51; alcohol
Utilities	935,091			935,091	
<i>Total Overhead</i>	<u>231,025,627</u>			<u>122,005,266</u>	
<i>Total Overhead &amp; Fringe Benefits</i>	279,297,610			170,277,249	
<b>Overhead Rate</b>				<b>174.68%</b>	
<b>Cost of Facilities Capital</b>				<b>1.07%</b>	

See independent auditors report and notes to financial statement.

TRC Companies, Inc.  
**Notes to the Statement of Direct Labor, Fringe Benefits & General Overhead**  
Fiscal Year Ended June 30, 2008

(1) The Company

TRC Companies, Inc. (NYSE: TRR) through its subsidiaries (collectively, the Company), is an engineering, consulting and construction management firm that provides integrated services to the environmental, energy, infrastructure and real estate markets. The Company is the leading provider of technical, financial, risk management and construction services to industry and government clients across the country. TRC is comprised of several subsidiary companies, including TRC Environmental Corporation, TRC Engineers Michigan, Inc., TRC Engineers, Inc. (California domestic corporation), TRC Engineers, Inc. (New Jersey domestic corporation), TRC Solutions, Inc. and TRC Engineers, LLC.

(2) Basis of Financial Statement Presentation

The Statement of Direct Labor, Fringe Benefits & General Overhead of TRC Companies, Inc. includes the accounts of eight legal entities. All firms provide integrated engineering, consulting and construction management services and share professional and technical staff. The legal entities are consolidated for financial statement presentation as they are under common control, their operations are closely interrelated and economically interdependent. Transactions between entities have been eliminated. All Companies have the same fiscal year end.

(3) Basis of Accounting

The Company's policy is to prepare and present the Statement of Direct Labor, Fringe Benefits & General Overhead on the basis of accounting practices prescribed by Subparts 9900 and Part 31 of the Federal Acquisition Regulations and certain other Federal regulations, which practices differ from generally accepted accounting principles. Accordingly, the above mentioned statement is not intended to present the financial position and results of operations of the Company in conformity with generally accepted accounting principles.

The preparation of this statement requires management to make estimates and assumptions that affect the reported amounts of expenses for the reported period. Actual results could differ from those estimates and assumptions.

The Company maintains a job order cost accounting system for recording and accumulating costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the Company's job order cost accounting system.

The Company's method of estimating costs for pricing purposes during the proposal process is consistent with the accumulation and reporting of costs under its job order cost accounting system.

(4) Allocation of Expenses

The Company consistently bills its clients for the following direct costs:  
auto, travel, sub consultants, shipping, permits, telephone, materials & specialized equipment

(5) Summary of Fringe Benefits and General Overhead Rates

The following represents the allowable overhead rates incurred by the Company for the year ended June 30, 2008:

**FAR Overhead:**  
Allocated Fringe Benefits & General Overhead / Direct Labor = Overhead Rate  
 $\$170,277,249 / \$97,479,739 = 174.68\%$

6) Cost of Facilities Capital

Based on the average interest rate of 5.25% applied to the average net book value of the Company's fixed assets of \$19,828,852 the cost of facilities capital rate is 1.07% of direct labor for the year ended June 30, 2008.

**MACCONEL & DODD, LLC***Certified Public Accounting Firm*PO Box 698  
Cortez, FL 34215  
(941) 794-1608  
Fax: 794-1657Maribeth MacConel  
CPA, CIA, CGFMDennis N. Dodd, Jr.  
CIA, CGFMIndependent Auditor's Report on Internal Control and ComplianceBoard of Directors  
TRC Companies, Inc.  
Windsor, CT 06095

We have audited the Statement of Direct Labor, Fringe Benefits & General Overhead of TRC Companies, Inc. (the Company) for the year ended June 30, 2008, and have issued our report thereon dated December 18, 2008.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States.

**INTERNAL CONTROL OVER FINANCIAL REPORTING**

In planning and performing our audit, we considered the Company's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statement, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Company's internal control over financial reporting.

A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned function, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process, or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in the internal control that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

**COMPLIANCE AND OTHER MATTERS**

As part of obtaining reasonable assurance about whether the Company's financial statement is free of material misstatements, we performed tests of its compliance with Subparts 9900 and Part 31 of the Federal Acquisition Regulations (FAR) noncompliance with which could have a direct and material effect on the determination of the financial statement amount. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

This report is intended solely for the use of TRC Companies, Inc. and governmental agencies that use the cost principles of the Federal Acquisition Regulations and should not be used for any other purpose.

A handwritten signature in black ink that reads "Macconel & Dodd".

MACCONEL & DODD, LLC  
December 18, 2008