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Hartland School District
97 Martinsville Road
Hartland, Vermont 05048

VERMONT COMMUNITY CLIMATE CHANGE GRANT PROGRAM APPLICATION

Applications will be evaluated on the project's ability to successfully address the five review criteria; the qualifications of the project personnel; the clarity of the project plan; and a sound and reasonable budget. The project review criteria and the general terms and conditions of the grant are described in greater detail in the Climate Change Grant Program guidance. All applicants are responsible for reading the guidance and, if awarded a grant, complying with the general terms and conditions.

Please respond to all sections below and attach all documentation that you are relying on to support your grant application.

Due Dates:

February 2, 2009 (Funding Round One)

April 1, 2009 (Funding Round Two)

Contact and Mailing Address:

Don Einhorn

Department of Environmental Conservation

103 South Main Street, West Office Building

Waterbury, VT 05671

802-241-1093

anr.VTClimateChangeGrant@state.vt.us

A. APPLICANT INFORMATION AND PROJECT SUMMARY

1. Project Title:
Hartland Elementary School Lighting Retrofit Project

2. Applicant Name (include all partners):

- Hartland Elementary School
- Hartland Energy Committee
- The Town of Hartland, VT
- Efficiency Vermont
- The Kiley Company

3. Primary Applicant Address:
Hartland Elementary School
97 Martinsville Road
Hartland, VT 05048

3. Authorized Contact Name, Phone and Email:
Judy Callens, Superintendent and Principal
Hartland Elementary School
802 436-2255
j.callens@hartland.k12.vt.us

4. Project Location:
Hartland Elementary School
97 Martinsville Road
Hartland, VT 05048

5. Brief Project Description (fifty words or less):

The Hartland Elementary School (HES) is proposing to retrofit 715 lighting fixtures in 34 rooms of the school building as part of an ongoing effort to reduce energy use, save tax dollars and promote a cleaner environment. The retrofit will reduce 50,304 kWh; 67,407 tons of CO2 and \$7,847 in energy costs per year – for a 4.41 year payback.

B. PROJECT WORK PLAN AND BUDGET

1. Describe the project work plan. Include in the work plan, your plan for project oversight and quality assurance. Identify the number of hours dedicated to each task and identify who will complete the tasks. Provide a project timeline. If applicable, identify all permitting requirements, include permitting in your project timeline, and indicate which permits have already been obtained.

Background

The HES contacted Matt Kiley from the Kiley Company in August 2008 to request an assessment of lighting efficiency in the older section of the school building, which was constructed in 1969. Mr. Kiley worked with Mike Howe, HES Building Director, and provided recommendations for energy saving lighting retrofits for 715 fixtures located in 34 different rooms/spaces in the HES building. The recommendations included two plans of attack, a "conservative" approach that would install new energy efficient fixtures, and an "aggressive approach" that relocates and reduces the number of fixtures in each room, as well as adding occupancy controls. The aggressive approach costs less and saves more energy, as there are 111 less fixtures being installed. (See attached proposal and exhibits from The Kiley Company.)

Mr. Kiley also reviewed the efficiency of fixtures in newer sections of the building, and determined that they were substantially efficient and did not warrant any upgrades.

The HES Building Director, Mike Howe, and Judy Callens, the HES Superintendent and Principal, reviewed the Kiley Company proposal and shared it with a working group of the Hartland Energy Committee. Together the partners determined that this project provided an excellent opportunity to reduce energy use and costs, and improve overall lighting within the school building. They also unanimously agreed that the aggressive approach was the best one to pursue.

The current status of the project is that the Hartland School Board is including the project in the HES Capital Improvement Budget that will be voted on by the Town voters at Town Meeting in March 2009.

Next Steps

If approved as capital improvement expenditure, HES would hire a consultant to:

<i>Date</i>	<i>Activity</i>	<i>Hours</i>
April	Detailed room by room survey of lighting conditions, light levels with detailed recommendations for improvement and energy conservation	12
April	Determine specifications for equipment to be installed in the lighting retrofit	6
April	Create bid documents	4
April	Send invitations to contractors	2
May	Conduct a contractor walk thru	4
May	Consult with contractors regarding bidding process	2
June	Orchestrate contractor selection process	1
July	Supervise contractor	8
August	Generate punch list	4
August	Conduct inspection of punch list	4
TOTAL		47

NOTE: No building permits are required for this project.

2. Provide the name, title and contact information for project implementation personnel. Describe their role and qualifications. Identify all subcontractors that will be involved in this project. Provide the name, title and contact information for primary subcontractor personnel and describe their role and qualifications.

Matt Kiley, Principal, The Kiley Company, P.O. Box 86 Peacham, Vermont 05862, 802 592-3986, mattkiley@fairpoint.net will serve as the project consultant, and will conduct roles outlined in the table above.

A qualified contractor will be selected to install the lighting fixtures, following the process outlined above.

3. Complete the project budget table and provide a narrative description of the project budget. The budget must include a minimum 10% cash match. Cash spent before the start of the contractual grant period cannot be used as a cash match. Cash matches of greater than 10% are encouraged. In-kind services are not eligible as a match.

a. Budget Table:

	Grant Share	Match Share	Total Cost
Personnel, Materials and Equipment			\$37,625
Other (Consulting Fee)		\$28,825	\$3,200
Total Budget	\$12,000	\$25,625	\$40,825,625

NOTE: HES will approach Efficiency Vermont for an energy efficiency rebate for the lighting fixtures. If that rebate is received, the match share will be lower than stated. However, it will not reduce the match share to lower than 10% of the project cost.

b. Budget Narrative:

HES will hire Kiley Company to conduct the tasks outlined above for a cost of \$3,200. The estimated cost of the personel, materials and equipment for the lighting retrofits is \$37,625. Exact costs will not be known until a contractor is selected.

C. PROJECT REVIEW CRITERIA

Describe how your project addresses the following criteria. Note that the five criteria applied to an application are described only generally below. Please refer to the Climate Change Grant Program guidance for a more detailed discussion of these criteria.

1. Measurable reductions in energy consumption and/or greenhouse gas emissions (30 points).

The estimated measurable reductions in energy consumption are 40,304 kWh, and in greenhouse gas emissions are 67,407 pounds in CO₂ equivalents per year. These estimates are based on tabulating the change in energy usage of each fixture and applying standard formulas for CO₂ generation per unit of electricity reduced.

2. Transferability (20 points).

This project is highly transferable to other schools or institutional buildings. It will demonstrate the specific process, strategies and costs involved in making this change that creates both an improved learning environment and reductions in cost and energy use.

The Hartland Energy Committee is planning to help the HES document the process and make the results known to Town residents and to other municipal energy committees in Vermont.

3. Viability of project approach (30 points).

While the implications of this retrofit are significant, there is virtually no risk of the project not succeeding as the fixtures to be installed are proven and will be guaranteed.

4. Cost-effectiveness (10 points).

This project has a 4.1-year pay back period, making it an excellent investment for both the school and the state. Given current fiscal condition of town and state government budgets, the Climate Change Grant would provide much needed assistance to enable this cost effective and environmentally sound project to come to fruition.

5. Public Education and Involvement (10 points).

The Hartland Energy Committee will work with the HES team to document this initiative and promote the financial and environmental benefits, through posting on the HEC and HES websites, articles in local papers and posters at Town events. The HEC is working to summarize many other actions taken by the school to increase efficiency in recent years, including installation of new boilers

and a new roof, to demonstrate the example that the school is setting for the broader community. The HEC and HES will prominently mention the support from Climate Change Grant, if received, when we promote the completed project at the start of the school year in September 2009.

D. ATTACHMENTS

1. For municipal entities, attach a resolution of the governing body authorizing the application.
2. For non-profit entities, attach proof of non-profit status.
3. In the space below, list all other attachments that are being submitted in support of this application.

Proposal from the Kiley Company that outlines the scope, detail and projected benefits of the project.

E. APPLICANT REPRESENTATIONS AND SIGNATURE

The applicant(s), by signing and submitting this application, make(s) the following representations with the understanding that the Department of Environmental Conservation will rely on these representations for the purpose of evaluating this application. The applicant(s) understand(s) and acknowledge(s) that should any of these representations be untrue, the Department may rescind any award of assistance and, in the Department's sole discretion, pursue any other appropriate remedy or relief:

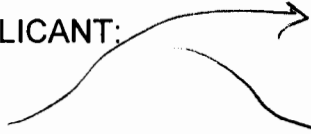
1. All information contained in this application, including attachments, is true and complete to the best of the applicant's knowledge and belief;
2. The applicant(s) has read and understands the grant background and guidance and grant terms and conditions and agrees to comply with them;
3. The primary applicant is a Vermont municipal entity or a non-profit organization, and if a non-profit, is in compliance with all requirements for maintaining its non-profit status; and
4. The applicant(s) will be ready to proceed with the project within 60 days of notification of the award.

NAME OF PRIMARY APPLICANT: Hartland Elementary School

NAME OF PARTNER: Hartland Energy Comm. Hec

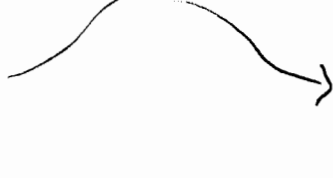
AUTHORIZED SIGNATURES

PRIMARY APPLICANT:



Pete Allison Hartland Energy Committee

PARTNER:



Judith Callens, Superintendent

Hartland Elementary School

97 Martinsville Road, Hartland, Vermont 05048 (802) 436-2255 fax (802) 436-2091

Vermont Department of Environmental Conservation
Climate Change Grant Program

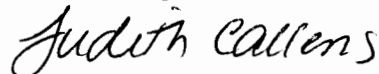
Dear Sirs,

The Board of School Directors of the Hartland Elementary School resolve to support the Climate Change Grant application. We thank you for the opportunity to continue to seek ways to increase the efficiency of our lighting systems.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon Shephard", enclosed in a large, hand-drawn oval.

Sharon Shephard, Board Chair

A handwritten signature in black ink, appearing to read "Judith Callens".

Judith Callens, Superintendent

The KILEY Company

Energy Excellence Since 1975

P.O. Box 86, Peacham, Vermont 05862 (802) 592-3965

mattkiley@fairpoint.net

8/29/08

Mike Howe
HARTLAND ELEMENTARY SCHOOL
97 Martinsville Rd.
Hartland, Vermont 05048

Dear Mike,

You were so right to ask me to visit your fine facility. The opportunities for improved lighting that saves energy are many. The walkthrough we had pointed out the possibilities and I have analyzed here how much they would save and what they would cost to supply and install. The recommendations I make are based on the existing light levels in each room, the condition of the luminaries (which we agreed need to be replaced) and the age of the power equipment within them.

The enclosed spreadsheet shows two plans of attack, a "conservative" one that installs new energy efficient light fixtures in the same locations and an "aggressive" plan that relocates and reduces the number of fixtures in each room as well as adding occupancy controls. Each corrects light levels. Each installs all new "state of the art" fixtures everywhere except four newer classrooms.

	<u>Conservative</u>	<u>Aggressive</u>	<u>Difference</u>
Watts Removed	12,300	17,100	4,800
Annual kwh Reduced	27,718	50,304	22,586
Annual Dollars Saved	\$4,324	\$7,847	\$3,523
Annual CO2 Reduced	37,142 lbs	67,407	30,365
Cost	\$50,060	\$37,625	\$12,435 less
Payback	11.19 yrs.	4.41 yrs.	6.78 yrs.
Cost			

Usually the "aggressive" track cost more than the conservative. In this building it costs less and saves more. This is because there are (111) less fixtures being installed. I am thrilled at this prospect. We proved that it would work in our simple experiment in the computer lab and it is my recommended way to proceed.

The above numbers are good estimates. The return on investment is based on project price that has been put through a formal bidding process. It is enhanced by the fact that the fixtures specified will be available through "factory direct" channels and that all avenues for Efficiency Vermont rebates have been harvested. These enhancements more than pay for the cost of my consulting service. An estimate of costs is enclosed. You may treat it as an ala carte menu or realize a savings by contracting for the full service price shown. I thank you for this opportunity to serve and will follow up with you in the near future to hear how it is received by your administration.

Best regards,

Matthew C. Kiley

The **KILEY** Company
P.O. Box 86 Peacham, Vermont 05862
(802) 592-3986 mattkiley@fairpoint.net

Proposal to: HARTLAND ELEMENTARY SCHOOL
97 Martinsville Rd.
Hartland, Vermont 05048

September 4, 2008

The **KILEY** Company agrees to provide the following lighting services:

- NC General consult on state of existing lighting
- NC Consult on design of lighting for expansion of lighting
- NC Quick Room by room survey of lighting conditions and light levels
- 12 Detailed room by room survey of lighting conditions, light levels with detailed recommendations for improvement and energy conservation
- 6 _____ Specifications of equipment for lighting retrofit or design
- 4 _____ Bid documents
- 2 _____ Invitations to contractors to bid
- 4 _____ Contractor walk thru
- 2 _____ Contractor consultation for bidding purposes
- 1 _____ Contractor selection discussions
- 8 _____ Contractor supervision
- 4 _____ Punch List generation
- 4 _____ Punch list inspection

FULL SERVICE CONTRACT PRICE \$3,200

The above checked services will be paid by the account at the rate of \$75 per hour, billed monthly and paid within ten calendar days of invoice date.

Acceptance _____ Date _____

KILEY Company _____ Date _____

The KILEY is insured by Vermont Coop Insurance, Middlebury, Vermont Policy # CP0164749, Engineers or Architects consultation.

The *KILEY* Company

The *KILEY* Company has been specifying energy conservation measures and techniques since 1975. With a focus on quality through innovation The *KILEY* Company has moved its lighting projects to the forefront of industry acceptance and implementation. This is accomplished accurately, thoroughly and with the most complete harvesting of any and all applicable *Efficiency Vermont* rebates.

The *KILEY* Company saves you money. Not only will you receive the most aggressive and adept set of specifications, but you will be shown how to have them installed at the least cost. Channels to "factory direct" pricing, close relationships with *Efficiency Vermont* procedures, easy of bidding and trouble free installation is how The *KILEY* Company pays for itself. You keep ALL the energy savings. In addition, The *KILEY* Company will also apply to *Efficiency Vermont* for inclusion in the Schools Initiative Program which subsidizes \$1000 of The *KILEY* Company's fee.

GOALS: Reliable, quality and long lasting lighting at least-cost installation and operating expense. Enhance existing lighting to the latest IES foot-candle and ergonomic specifications while delivering an energy conservation project with an ATTRACTIVE PAYBACK.

METHODOLOGY:

- 1) A closely held set of facility objectives is agreed to.
- 2) A detailed audit of the existing ROOM by ROOM conditions is conducted. Foot-candle measurements will be taken and recommendations made adhering to the desires of both the room's occupants and facility management.
- 3) Resulting audit spreadsheet will forecast room by room consumption, savings, costs, utility rebates and net paybacks room by room.
- 4) Audit recommendations discussed and finalized.
- 5) Specifications and bid documents drawn up.
- 6) Bidders invited, walk-thru conducted, bids analyzed, project supervised.

RESULT

Quality Project
Maximized Savings
Least Cost
Headache Free Procedure
Net "no cost" consulting service

Matt Kiley
Designed and Built
Energy Conservation Lighting Jobs
in Vermont

<u>Schools</u>		<u>Hospitals</u>	
S. Burlington HS	\$258,000	MCHV campus of FA	\$173,000
Burlington Schools	\$530,000	Gifford Hospital	\$101,000
BFA-St. Albans	\$143,000	UHC	\$117,000
Spaulding HS	\$110,000	Mt. Ascutney	<u>\$ 29,500</u>
Brattleboro HS	\$177,000		\$793,000
Milton Schools	\$185,000	<u>Industrial / Mfg.</u>	
BFA Fairfax	\$ 75,000	Fonda Mfg.	\$121,000
Trinity College	\$126,000	Tambrands	\$146,000
Lamoille Union HS	\$109,000	Georgia Pacific	\$167,000
St. Albans Elem	\$139,000	Cameo Printing	\$ 43,000
Danville School	\$ 63,000	Milton Bradley	\$ 29,500
Fletcher School	\$ 12,000	Eveready Battery	\$116,000
Underhill School	\$ 39,000	Skyline Homes	\$ 46,000
Waterford School	\$ 23,000	MacKenzie Meats	\$ 87,000
Mater Christie	\$ 61,000	Specialty Paperboard	\$ 37,000
Lunenburg	\$ 19,000	<u>Office</u>	
Gilman	\$ 11,000	Chase Mill	\$107,000
Chester-Andover	\$ 74,000		
Sharon Elem	\$ 23,000	<u>Other States</u>	
Jay-Westfield	<u>\$ 11,000</u>		\$5,900,000
	\$2,188,000		

Hartland Elementary School Climate Action Grant Application

Revised Budget

3. Complete the project budget table and provide a narrative description of the project budget. The budget must include a minimum 10% cash match. Cash spent before the start of the contractual grant period cannot be used as a cash match. Cash matches of greater than 10% are encouraged. In-kind services are not eligible as a match.

a. Budget Table:

	Grant Share	Match Share	Total Cost
Personnel	\$5,000	\$11,178	16,178
Materials		1,882	1,882
Equipment	\$7,000	\$12,565	19,565
Other (consulting fee)		\$3,200	\$3,200
Total Budget	\$12,000	\$28,825	\$40,825

NOTE: HES will approach Efficiency Vermont for an energy efficiency rebate for the lighting fixtures.

b. Budget Narrative:

HES will hire Kiley Company to conduct the tasks outlined in the response to Section B., Question 1., (under the subheading: “**next steps**”) for a cost of \$3,200.

The Personnel costs includes labor, taxes and contractor overhead. The Equipment costs include the lighting fixtures themselves, as well as the contractor’s markup on the products. Materials costs represent hangers, electrical wire, and hardware. The total project cost is an estimate. Final costs will not be known until a contractor is selected. However, based on experience with similar projects, the projected total cost is considered a conservative figure.

NOTE: Updated Phone Number for Kiley Company is: (802) 592-3991 or 592-3965