

SUMMARY INFORMATION

Project Title: Campus/Community Energy Outreach Program

Applicant: City of Lawrence (Kansas)
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In Partnership With: University of Kansas Center for Sustainability (CFS)

Funding Requested: Federal: \$ 63,267 over 3 years
Non-Federal: \$ 39,776 over 3 years

Total Project Cost: \$103,043 over 3 years

Project Period: January 1, 2010 – December 31, 2013

Estimated Outputs: Included in report, GHG reductions to be measured throughout implementation of project. Overall community goal of 50% reduction in GHG emissions by 2050.

NARRATIVE PROPOSAL WORK-PLAN

Project Summary

Complimentary Activities

In March of 2006, the City of Lawrence signed on to the U.S. Conference of Mayors Climate Protection Agreement. In order to advance the goals of the Agreement, a Mayor's Task Force on Climate Protection (commonly known as the Climate Protection Task Force, or CPTF) was appointed in February of 2008 to review climate protection issues and develop a Climate Protection Plan for the City of Lawrence. The Climate Protection Plan was presented to the City Commission in March of 2009. The plan outlines an 80% reduction in greenhouse gas emissions by 2050 as a climate mitigation goal for the City of Lawrence. Recognizing that many actions are necessary to achieve this goal, the CPTF developed seven recommended strategies:

1. Provide dedicated staffing and adequate funding to support climate protection and sustainability initiatives.
2. Strengthen energy conservation policies and building standards.
3. Incorporate the goal of reducing greenhouse gas emissions into land use planning.
4. Develop transportation policies and programs to consume less energy and reduce emissions.
5. Establish outreach and education programs on emission reduction issues.
6. Expand source reduction and waste reduction programs and initiatives.
7. Exercise leadership by prioritizing efforts to reduce greenhouse gas emissions in municipal operations.

An initial step in addressing the recommended strategies has included a partnership between the City of Lawrence and Douglas County to establish a jointly funded county-wide Sustainability Coordinator position. This position would be created to analyze existing facilities and recommend ways to reduce energy use and review sustainability issues. Energy analysis and review would include energy audits of public facilities to determine best practices and identify areas for reducing energy use. The City has applied for funding for the first year of this position through the Energy Efficiency and Conservation Block Grant Program. It is estimated that this position will be filled in the fall of 2009.

Proposed Outreach Program, Benefits and EPA Priority Areas

Working with the University of Kansas Center for Sustainability (CFS), the City has also identified a pilot program for outreach and education regarding energy conservation. To address recent economic and environmental concerns, a number of programs have been established to "retrofit" houses and provide incentives for homeowners to make improvements to their homes that will result in improved energy efficiency and conservation. However, such projects may not be reaching tenants of apartments and rental homes. Their participation in environmentally preferable behaviors is needed for the City to reach its goal for reduction of greenhouse gas emissions.

In a university community like Lawrence, a significant portion of the population resides in rental properties. Most recent census data puts total renter occupied housing at 49.3% of the Lawrence population. This demographic has little control in making structural or mechanical changes that can help in reduction of residential GHG emissions. Adding to this challenge,

many of these facilities experience annual turnover in tenants. Education and outreach are needed to help empower these individuals and assist them in making changes in their lifestyle to reduce energy consumption and associated greenhouse gas emissions.

This project will establish a peer-to-peer network to educate tenants about strategies for home energy conservation and efficiency and provide resources for energy reduction. Efforts will initially be focused on neighborhoods and/or apartment complexes with large student populations. However, the project will serve as a pilot and model to create a successful program that can be extended to include a broader population.

During the spring and summer of 2010, a paid Energy Intern will work with the City of Lawrence, the CFS, local utilities, and other area partners to gather data about energy use of the student residential population. This may include conducting an electronic survey on current consumption behavior and electronic appliances owned, as well as analysis of residential energy bills in targeted neighborhoods and apartment complexes. This phase of the project will result in the development of a list of best practices for tenants that will have the greatest impact on reducing GHG emissions, as well as a list of resources and materials that can be provided to tenants to aid in this process. Using these tools, efficiency and conservation kits will be developed to distribute to tenants involved in the program. Data collected will also aid in identifying apartment complexes and/or neighborhoods that would benefit most from this project. Target areas for the project will be identified based on opportunities for improvement and perceived ease of reaching those areas through an education and outreach campaign.

During this phase of the project, the CFS will recruit volunteers for the program through its existing network of student organizations, campus volunteer recruitment programs, and recruitment events on campus. Ideally, volunteers will live in the targeted area(s) to increase familiarity with the area and create a network of volunteers that are perceived to be easily accessible.

In September 2010, all volunteers will participate in an 8-hour training program that will include presentations by the Energy Intern, local utilities, and area partners and will focus on regional energy production, energy consumption trends among the target population, energy efficiency, and conservation strategies for renters. Training will also include home visits to conduct practice home energy assessments and discuss potential opportunities for energy reduction in both staged and unaltered settings. Training sites will be recruited from the University of Kansas Student Housing Association and other potential partners.

Upon completing training requirements, volunteers will be assigned to a team of 2-3 assessors and be responsible for a section of the target neighborhood(s) or specific apartment complexes. Volunteer assignments and activities will be coordinated by the Energy Intern. Starting in October, teams will make initial contact with residents to inform them of the program, highlighting the opportunity to lower energy bills and reduce environmental impacts. This initial visit will provide basic conservation and efficiency information to tenants and explain the assessment process. Tenants will be encouraged to participate in a home energy assessment at that time or sign up for a second visit to complete the assessment. The program will have an overall goal to complete assessments at 100 residences.

Through these audits, volunteers will work with residents to identify opportunities for energy reduction and efficiency. The team will walk through the residence room by room with each tenant and note areas for possible improvement. Energy and light meters will be used to identify and estimate potential savings. Team members will also discuss other opportunities for energy reduction such as water conservation and public transportation. At the conclusion of the home energy assessment, tenants will be provided with a summary of potential actions they can take to reduce their energy use. They will also be encouraged to sign an online pledge, committing to specific actions and reduction goals established during the home visit. Each residence will also receive a conservation and efficiency kit containing tip cards, prompts such as refrigerator magnets and labels for light switch plates and appliances, CFLs, and other materials provided by partner organizations.

When possible, volunteers will contact the landowner for each residence to explain the home energy assessment process and discuss improvements that could be made to the facility to help reduce emissions. This will be especially important in cases where energy bills are paid by the landowner instead of the residents. Such landowners may be encouraged to refund a portion of the rent to participating residents equal to any savings that can be connected to changes made by renters following an assessment.

Following home visits, volunteers will remain in contact with residents through monthly email communications and follow-up phone calls as needed to answer any questions and encourage continued participation in the program. In March/April 2012, teams will make a return visit to homes to follow-up on any challenges, monitor progress, and provide additional information. Team members will then begin evaluating the impact at each of the residences they worked with and calculate GHG emission reductions achieved through the project. This will be done by comparing energy use with baseline data and normalizing data based on degree heating/cooling days. To improve access to utility bills and further engage residents in the monitoring process, participants will be encouraged to use a special section of the GreenQuest website (www.mygreenquest.com) set up through the CFS.

Following evaluation of the program by volunteers, participants, and partners, the program will be expanded to include new target areas and follow-up visits to residences that participated in the first round of assessments. Return visits to Cycle One residences will provide an opportunity to evaluate potential effects of renter turnover (e.g. whether CFLs, weather stripping, and other modifications made by former residents are left in place by the landowner and new residents). The second year of assessments will follow a similar timeline as above.

Upon completion of the second year of home energy assessments, the program will be evaluated for expansion to new areas of the community, not limited to student populations. CFS, the City, and other community partners will work together to replicate materials that can be used to reach a broader audience. By the end of 2013, materials for the expansion will be created by the Energy Intern and the City will work with the CFS to develop a strategy for continuing the program and expanding it to the rest of the community.

Partnerships and Expertise

As noted throughout this narrative, the program is grounded in partnerships between the Center for Sustainability and the City in support of the intern position and in the outreach program. An existing and evolving partnership between the City and Douglas County will also

be leveraged by utilizing the skills of a new Sustainability Coordinator. It is anticipated that additional partnerships with local utilities will be established in order to develop the conservation and efficiency kits and other collateral and educational materials. The skills and expertise of members of the broader community will be required for development and implementation of the program. The City has a rich and diverse population and active boards and commissions from which to solicit input. It is envisioned that the CPTF, Sustainability Advisory Board and Peak Oil Task Force may all provide assistance and input on development of the program and final review of outcomes.

Potential for Replication of Project

In developing the outreach program, the City and CFS have looked to a similar program in Boulder, Colorado in conjunction with Colorado University. It is anticipated that once the program has been developed, tested and evaluated, it could be duplicated in other university communities.

Environmental Results (Outcomes, Outputs, and Performance Measures)

Activity	Output	Outcome	Performance Measures
Community and Energy Research (Including Community Partner Input)	<p>Best practices guide for student resident energy conservation and efficiency developed by September 2010</p> <p>Training materials for volunteer program developed by September 2010</p> <p>Resources for Home Energy Kits developed by October 2010</p>		
Volunteer Training	Volunteer training sessions (2) held in September 2010 and September 2011	<p>Increased awareness among volunteers relating to energy production, energy conservation and efficiency practices, local resources</p> <p>Ability to identify opportunities for reduction during home visits</p>	<p>Number of volunteers participating</p> <p>Comparison of pre- and post-test results</p> <p>Performance of volunteers during home visits</p>
Mini-Assessments	200 residences (homes or	Increased awareness of energy	Number of residences participating in mini-

	apartments) committed to mini-audits over 3 year period by end of project Minimum of 200 CFLs installed by end of project Other energy conservation/efficiency measures installed by end of project (e.g. weather stripping, insulation gaskets) Behavior modification	conservation and efficiency practices among target population 130 tons CO2 reduction through life of bulbs CO2 reductions due to installations, measure to be determined following assessments CO2 reduction due to changes in personal behavior (i.e. turning off electrical equipment when not in use) to be determined following mini-assessments	assessments Number of bulbs in place upon follow-up visits; CO2 reductions measured in targeted GHG Inventory Number of measures in place upon follow up visits; CO2 reductions measured in Targeted GHG Inventory Number of behaviors committed to through pledge form; CO2 reductions measured in Targeted GHG Inventory
Targeted GHG Inventory	Targeted GHG reports completed in spring 2011 and spring 2012	GHG reductions as a result of home visits	Difference in GHG emissions for targeted residences before and after the program
Community-Wide Expansion	Best practices guide for tenant energy conservation and efficiency developed by end of project Expansion plan for including broader population in progress by end of project		
Reporting	Progress Report Final Report		

Programmatic Capability and Past Performance

Aside from recently awarded ARRA grants, the majority of federally funded assistance to the City of Lawrence has been through the Community Development Block Grant Program

(approximately \$28.3 million since 1975) and the Home Investment Partnerships Program (approximately \$8.8 million since 1994). Funded CDBG projects include comprehensive housing rehabilitation completing an average of 12-15 units per year, weatherization and emergency loan programs, infrastructure improvements including streets, sidewalks, water and sewer lines, and parks projects as well as funding for numerous public service agencies and neighborhood associations. HOME program funding has provided assistance for approximately 15 first time homebuyers per year since the inception of the program. Additionally, tenant based rental assistance is provided for 35-40 households per year, and funds are provided to a local non-profit affordable housing provider to create additional affordable housing units.

The City submits an annual report to HUD regarding CDBG and HOME grant expenditures and outcomes (Consolidated Annual Performance Evaluation and Report – CAPER.) Recently, performance measurement has been instituted for both programs with good success. With regard to the administration of the CDBG and HOME grant programs, the City of Lawrence is considered a high performer by the local HUD office.

The Center for Sustainability works extensively with the student population at the University of Kansas through a network of student organizations, events, and individual projects. These relationships allow CFS to effectively distribute information to students who are actively engaged in addressing issues of sustainability, including energy conservation and efficiency, and gather feedback regarding student interest in such topics. Currently, CFS oversees a volunteer program which maintains a 5,000 square foot native rain garden on the University campus. Through this program, CFS provides short training sessions to help students identify and address maintenance concerns of the garden and coordinates work through organizations and individual contacts. This experience will be an asset throughout the project, especially with recruiting, training, and coordinating volunteer efforts. The CFS Director will serve as the main staff person dedicated to this effort. A resume and letter of support from the Director are attached.

DETAILED BUDGET NARRATIVE

The three-year budget totals \$103,043, of which \$63,267 is requested from the Climate Showcase Communities Grant. The information below describes total expenditures and supports the separately attached SF424A required reporting form.

Applicant funding reflects in-kind contributions of existing staffing and benefits as well as support for training and printing costs provided either by the City of Lawrence or the Center for Sustainability.

Personnel

Federal funding will be used to hire one part-time intern to conduct research and coordinate volunteers. In-kind support from the City of Lawrence, Douglas County, Center for Sustainability, student volunteers, and community partners will be used as non-federal match

	EPA Grant	Applicant
0.5 FTE Intern @ \$12/hour for 3 yrs	\$37,440	\$0
0.05 FTE Sustainability Coordinator @ \$70,000/yr for 2 yrs	\$0	\$6,999
40 hrs support from Assistant City Manager over 3 years @ \$56/hr	\$0	\$2,240
70 hrs support from Center for Sustainability Director over 3 yrs @ \$23/hr	\$0	\$1,610
1920 Volunteer hours over 3 yrs @ \$10/hr equivalent	\$0	\$20,200
53 hrs Community Partner in-kind support over 3 yrs @ \$20/hr equivalent	\$0	\$1,060
Subtotal	\$37,440	\$32,109

Fringe Benefits

As with salaries noted above, federal funding will be used to pay fringe benefits for a part-time intern to conduct research and coordinate volunteers. In-kind support from the City of Lawrence, and Center for Sustainability will be used as non-federal match.

	EPA Grant	Applicant
0.5 FTE Intern @ 15% of salary	\$562	\$0
0.05 FTE Sustainability Coordinator @ 35% of salary	\$0	\$2,450
40 hrs support from Assistant City Manager @ 35% of salary	\$0	\$784
70 hrs support from Center for Sustainability Director @ 30% of salary	\$0	\$483
Subtotal	\$562	\$3,717

Travel

Federal funding will pay for travel for 2 staff to attend Climate Showcase Communities Training during each of the 3 years of the program.

	EPA Grant	Applicant
Travel for 2 staff to attend Climate Showcase Communities Training for 3 yrs		
Airfare: 2 @ \$300 round trip (x 3)	\$1,800	\$0
Lodging: 2 staff X 3 nights @ 200/night (x 3)	\$3,600	\$0
Per Diem: 2 staf X 4 days @ \$60/day (x3)	\$1,440	\$0
Other Travel Costs: \$50 (x3)	\$150	\$0
Subtotal	\$6,990	\$0

Supplies

Supplies include equipment for home energy audits and energy conservation and efficiency kits that will be distributed to participating residents.

	EPA Grant	Applicant
10 Kill A Watt Energy Monitors @ \$30	\$300	\$0
5 Light Meters @ 130	\$650	\$0
5 Ambient Air Thermometers @ \$65	\$325	\$0
5 IR Thermometers @ \$50	\$250	\$0
5 Netbooks @ \$350	\$1,750	\$0
200 Home Energy Kits @\$75	\$15,000	\$0
Subtotal	\$18,275	\$0

Other

Other expenses include costs incurred related to volunteer training and printed materials that will be distributed to residents or developed for the community expansion program.

	EPA Grant	Applicant
Lunches at annual training, 2 trainings with 30 participants @\$15	\$0	\$900
Space rental for trainings, 2 trainings @ \$50	\$0	\$100
Printing		
200 sets of educational materials @ \$10	\$0	\$2,000
35 Training/Audit Manuals @ \$20	\$0	\$700
Other materials	\$0	\$250
Subtotal	\$0	\$3,950

TOTAL COSTS

	EPA Grant	Applicant
Total Direct Costs	\$63,267	\$39,776
Total Indirect Costs	\$0	\$0
TOTAL BUDGET	\$63,267	\$39,776

\$103,043

ATTACHMENTS

- Project Timeline
- Center for Sustainability Director Resume
- Letters of Support
 - Center for Sustainability
 - Westar Energy