The Community Energy Champions Grant Program

Handbook & Case Studies

- Acterra
- Alviso Neighborhood Group
- Asian American Center of Santa Clara County
- Boys & Girls Clubs of Silicon Valley
- Catholic Charities of Santa Clara County
- Center for Training and Careers
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- Midpeninsula Community Media Center
- Rebuilding Together Silicon Valley
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SILICON VALLEY energy watch

About Silicon Valley Energy Watch

The City of San José administers Silicon Valley Energy Watch (SVEW), a partnership with Pacific Gas and Electric Company (PG&E) to provide energy efficiency resources throughout Santa Clara County. Part of the State's energy efficiency portfolio under the auspices of the California Public Utilities Commission (CPUC), SVEW is one of 19 Local Government Partnerships in PG&E territory. SVEW works in four main areas: small business energy savings and rebates; low- and moderate-income residential energy assistance; municipal and nonprofit energy savings and rebates; and community-wide education, outreach, and service coordination. The City has administered SVEW since 2004.

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Introduction

Achieving California's ambitious energy efficiency and climate goals[1] requires behavioral approaches as well as technology and financial strategies.[2] Social science literature and evidence from the field indicate that behavioral initiatives play a crucial role in realizing the full potential of consumer energy savings. Behavioral programs may "prime the pump" for retrofits and measure uptakes by expanding awareness of resources, cementing conservation-oriented behavior, ensuring that buildings are operated properly once measures are installed, and augmenting demand beyond the capacity of mandates or incentives.[3] Gradually, utilities and state governments have begun to support behavioral energy efficiency programs. In 2010, the California Public Utilities Commission (CPUC) recognized behavioral programs as an "eligible energy efficiency resource" in the statewide energy efficiency portfolio.[4]

For behavioral programs to thrive, appropriate implementation frameworks must be identified. Which initiatives are best delivered at the state or regional level, and which are best left to community-based implementers? How can local implementers augment statewide campaigns, and how can governments and utilities best support them to ensure broad reach, optimal results, and consistent messaging?

Silicon Valley Energy Watch (SVEW) created the Community Energy Champions Grant (CECG) to embed an effective implementation framework, one that harnesses the power of community-based organizations to promote energy efficiency. Launched in early 2011, the CECG awarded funding and technical assistance to 16 local agencies to deliver targeted behavioral campaigns in communities across Santa Clara County, California. Largely completed by the end of 2012, the CECG experience indicates that a community-based approach, with government and utility support is, indeed, an effective delivery mechanism for energy efficiency programs. Within two years, more than 19,000 Pacific Gas and Electric Company (PG&E) customers throughout the county have been reached through in-home audits, workshops, community events, and other tactics used by the various campaigns, resulting in real energy savings across a diverse swath of communities. Program results, as discussed here and in the case studies that follow, reflect the merits of the community-based approach to energy-efficiency.

The City of San José joins with PG&E in proudly presenting this handbook of the SVEW-CECG program to further the concept and use of the community-based approach to behavioral energy efficiency initiatives.

Program Overview

The CECG enabled community-based organizations (CBOs) to deliver innovative campaigns that increased participation in energy efficiency programs and reduced overall energy consumption. Leveraging community agencies for the delivery of behavioral programs has the following key advantages:

- Members of disenfranchised communities often trust CBO representatives more than government or utility staff to deliver complete information, relevant messages, and culturally-appropriate programming.
- CBOs are vital liaisons between government and the communities they serve. CBOs exist to directly address community needs, set locally specific goals, and are better positioned to achieve high levels of participation.[5]
- CBOs are often adept at addressing participation barriers to capture the full extent of non-energy benefits.[6] They are experienced in reaching diverse and hard-to-reach markets with low-cost program delivery methods. They typically manage multiple funding sources, enabling diverse areas of emphasis, longer time horizons, and mission-driven programming.
- People may relate better to energy efficiency messages that are presented within a unifying concept promoted by CBOs, such as public health, which can help contextualize energy use. Energy is not easily visualized, and more obvious needs, such as food and medicine, tend to override attention.

The Community Niche

Targeted local programs are particularly critical in Santa Clara County. At the heart of Silicon Valley, in the southern San Francisco Bay Area, the county's two million residents are geographically, socioeconomically, and linguistically diverse. 37 percent are foreign-born, and half speak a language other than English at home. With roughly half of the county's population, the City of San José has no racial majority: Asians,

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Latinos, and Caucasians represent roughly one-third each of the City's population. The Asian community includes the largest Vietnamese population of any US city.[7] While the county's median household income was $85,000 in 2010, more than 30 percent of students qualify free school meals—a figure that has risen steadily since 2006.[8] About 20 percent of adults hold graduate degrees, while 14 percent of adults have not completed high school. The county includes rural farmland, yet is also home to high tech giants such as Adobe, eBay, and IBM, as well as numerous clean-tech startups.

Santa Clara County thus stands as a complex web of subcultures. In this mix, targeted, local delivery as done by CBOs can greatly increase the efficacy of public messaging and programs.

Grant Mechanics

The City of San José administered the CECG through SVEW, and publicly announced the grant opportunity in February 2011. The program was open to 501(c)3 CBOs and local government agencies in PG&E territory within Santa Clara County. Grantee selection was based on three criteria:

- How well does the program identify and target a specific or underserved community through innovative outreach and engagement strategies?
- Is energy efficiency encompassed within a broader sustainability framework?
- Does the program address ongoing implementation beyond the grant?

Grants ranged from $10,000 to $25,000 for CBOs and $15,000 to $30,000 for public agencies. They were awarded in August 2011, to be spent by December 2012.

Building Organizational Capacity

The CECG was more than just a financial grant program. Using a "train the trainer" model, SVEW provided grantees with technical assistance, core messages, starter energy efficiency kits, policy information, and resource linkages. Grantees used the assistance and funding to educate staff, train volunteers, and implement customized programs.

SVEW worked to ensure that core energy efficiency messages were consistent among the diverse grantees. Those messages, promulgated by PG&E and the CPUC, included measure loading order, weatherization, water-energy nexus, and more. Grantees needed varying levels of assistance in this area. They were receptive to instructions on basic principles of building science and other topics, and became effective communicators of energy information. The entire CECG network rolled up to appropriate statewide energy efficiency programs, so that the grantees were integrated as part of the larger universe of public energy and conservation programs.

SVEW provided assistance to grantees in several ways:

1. ***Technical Training:*** Grantees were required to attend three technical sessions, held early on in the program. Grantees networked during these sessions and shared knowledge and resources, learned new outreach strategies from each other and, in some cases, found additional service areas that fit their target population profile. The training sessions addressed three main topics:
   - Basics of energy efficiency, including technology options, incentives, policies, and core messages
   - Evaluation and measurement methods for behavioral programs
   - Practices of Community Based Social Marketing (CBSM)
2. ***Program Collateral:*** SVEW provided energy efficiency resources to benefit grantees as well as to distribute to their target populations. This included language-appropriate energy efficiency information where available, connection to SVEW's nonprofit direct installation program, and marketing materials for PG&E's low-income residential programs.
3. ***Site Visits:*** SVEW conducted three formal site visits with each grantee to provide support, address concerns, identify collaboration opportunities with other grantees or municipal programs, and ensure that energy efficiency messaging was current and consistent.
4. ***Online Project Management:*** SVEW used an online project management site to disseminate information and facilitate communication among grantees. Some grantees posted on it frequently to announce events or ask questions, while others accessed it only to receive information.

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Findings

SVEW assessed the CECG delivery framework using four key tools:

1. ***Status Reports:*** Grantees submitted three Status Reports and a Final Program Report; these tracked key statistics and qualitative information that enabled SVEW to assess the CECG's overall demographic reach, mix of outreach strategies and measures, application of technical assistance and utility resources, and staffing.

2. ***Grantee Feedback:*** Grantees also provided formal feedback on various CECG program components through evaluations of the appropriateness, accessibility, and usefulness of technical assistance.

3. ***Surveys:*** Many grantees surveyed their target populations and agency staff when staff education was a core campaign component. These surveys help to tell the story of the CECG, and help grantees assess whether to retain, adjust, or jettison their new program elements.

4. ***Ongoing Monitoring and Direct Observation:*** Through site visits, events, and ongoing communication, SVEW staff observed grantees' organizational structures, internal communication, outreach strategies, and overall program delivery.

The CECG enabled an array of local organizations, through targeted, innovative campaigns, to reach unique communities that may otherwise have been missed by traditional energy efficiency programs. Within the first few months, thousands of PG&E customers had been reached through in-home audits, workshops, community events, and other tactics. By program end, more than 19,000 customers had been reached by the various campaigns. As of November 2012, all but two of the CECG grantees had concluded their campaigns; the remaining two expected to conclude in early 2013. Several of the grantees developed and integrated new program components or new areas of expertise within their organizations.

The findings are organized according to analysis of 1) organizational factors that influenced the grantees' success; 2) the CECG delivery model itself, including technical assistance, and 3) notable challenges.

1. Organizational Factors Influencing Outcomes

Strong Base of Staff or Volunteers: Well-established organizations with a strong staff or volunteer base proved to be most adept at integrating technical assistance. They tended to be more resilient in weathering changes, including the growing pains of incorporating new elements into existing programs.

For example, the City of Cupertino, an environmental leader and the only public agency grantee, ran two campaigns: Growing Greener Blocks and Cupertino GreenBiz. Both served well-defined target populations, leveraged existing networks, and incorporated other city programs and regional resources. Dedicated staff and a stable organization enabled staff to seamlessly integrate resources, ensuring that both campaigns were rooted in the city's broader economic development and renowned sustainability efforts. Teams of student interns and community leaders helped amplify the messages. In a different example, Acterra and Rebuilding Together Silicon Valley both ran strong campaigns that centered on building armies of trained volunteers. Their programs were nimble and easily adapted to new strategies.

Target Population Knowledge: Grantees who well understood their target populations and had networks of interdependent institutions tended to enjoy natural trust from their communities and experienced more success in reaching their goals. The Healthy Art Program provides an example of one such campaign. The "Art Inspector" worked with local artists to replace energy intensive and toxic materials with environmentally friendly alternatives, facilitating a shift to low-impact art among participants. The fact that the Art Inspector is also a local artist who applies the same practices lent credibility to the campaign.

School-based programs with target population knowledge similarly demonstrated the value of community relationships. Four educational institutions implemented energy-focused curricula as a lynchpin for broader community outreach. Catholic Charities piloted an energy efficiency unit within their Balanced Literacy program at ten school sites. With a strong framework and clear target, the unit is now expanding to 24 schools amid broad family and administration support. Students at Enlighten Chinese School created a Mandarin/English "Energy Saver Handbook," which was then distributed to 1,000 enthusiastic family and community members.

Conversely, the organizations with the least knowledge of their target communities at program outset faced the greatest difficulty in gaining traction. Green Energy Agents

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(GEA) and Acterra both applied unique models, successful elsewhere, in new communities. With a lower awareness of the new communities' needs, they were forced to shift tactics. Both agencies had identified a program model first and then tried to apply it to a particular community, rather than first understanding the communities' needs and then using available resources to develop an appropriate program. Engagement levels increased after significant adjustments. In fact, after developing a new strategy to engage tenants of multifamily buildings, Acterra exceeded their outreach targets. GEA found new community partners and learned how their program model could be adapted for diverse populations.

Innovation and Persistence: Several grantees integrated entirely new components into their service offerings. This required persistence, and sometimes necessitated innovations on-the-fly. For Midpeninsula Community Media Center (Media Center) and the Center for Training and Careers (CTC), innovations were prompted when planned outreach tactics proved untenable. The Media Center developed a new set of relationships with schools and teachers to expand the impact and environmental messages of their Greenlight Film Festival, and CTC established key relationships and a protocol for conducting effective outreach in low-income multifamily complexes. In both cases, sheer persistence led to new program offerings, engagement levels that far exceeded initial expectations, and lasting networks with complementary providers.

Incorporation of Environmental Values in Agency Missions: Environmental organizations easily assimilated an increased energy focus. For example, Rebuilding Together Silicon Valley (RTSV), a volunteer-driven housing rehabilitation agency, easily augmented their biannual Rebuilding Day with the inclusion of energy efficiency upgrades and homeowner education. For others, introducing energy required more training to align the new topics with other services.

Energy Efficiency Measures: Free home assessments that include education and measure installations have a clear impact on immediate behavior change. Most of the organizations using this delivery method have structured training programs (Acterra, RTSV, De Anza College, and CTC), and easily included energy efficiency with their core service offerings. These are qualitatively different from the "long-term" programs that targeted awareness-raising through intensive outreach and fostering ongoing community relationships. RTSV and Sacred Heart Community Service address both realms by integrating measure installation with broader social service provision.

Prior Expertise is not Necessary: While prior energy efficiency knowledge was helpful in some cases, it did not appear to affect the likelihood of success. In fact, the grantees who faced the most difficulty in reaching their outreach targets (GEA, Acterra, CTC, and Alviso) were initially selected for the pilot based, in part, on their demonstrated energy efficiency experience.

Experience with government or utility contracting also did not appear to affect the likelihood of success. Expectations for data collection, reporting, and ongoing communication were conveyed through the technical sessions. Even those with little experience working closely with publicly funded programs provided complete and illustrative data, while others were less forthcoming.

2. Delivery Model Effectiveness

SVEW's technical sessions proved effective in promulgating core messages, establishing cohesion among grantees, and setting expectations. Session evaluations were highly positive. Grantees requested more workshops, with more information overall but less per session, and preferred sessions to be clustered closer to program start dates. Campaigns with and without energy efficiency incentive components were equally responsive and adaptive to technical assistance.

Staying current with grantees' progress and technical assistance needs was time intensive, but enabled SVEW to respond quickly to challenges, and proactively suggest collaborations when grantees would not otherwise know to seek them. The online project management tool was used less than initially anticipated. Grantees requested a more user-friendly site through which they could easily communicate with one another and share materials. Improving the site would likely be a worthwhile investment.

Over the course of the program, SVEW staff learned which areas of technical assistance worked best, and which appeared too resource-intensive to be efficiently replicated. Providing outreach assistance to the organizations that had trouble reaching their target populations was effective but time consuming. SVEW provided limited marketing assistance to Acterra and GEA, but these efforts pulled staff time from other activities, and was less effective than the efforts of grantees who better understood their target populations. This appeared to confirm the premise that local agencies and CBOs conduct more effective and efficient outreach to narrowly targeted populations than larger public

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institutions. Nonetheless, half of grantees indicated that SVEW's technical assistance was "Extremely Helpful" in enhancing their marketing and outreach strategies.

On the other hand, SVEW's collaboration assistance was expedient and often fruitful. Concurrent support of multiple programs enabled SVEW to identify complementary strengths and facilitate cooperation that would not have otherwise occurred. RTSV and CTC collaborated to encourage women in alternative career classes to become Resource Coordinators for RTSV's Rebuilding Day. Students expanded their resumes, and RTSV enjoyed the specially trained volunteers. Enlighten Chinese School worked with the Media Center to give their students greater recognition, and to help the Greenlight Film Festival reach a more diverse audience. De Anza College provided student interns to assist with Acterra's Green@Home program, the Alviso neighborhood campaign, and Cupertino's GreenBiz initiative. Grantee evaluations corroborate these stories: 59% of respondents felt that SVEW's assistance was "Extremely Helpful" in facilitating collaboration with other organizations.

Overall, the CECG program expanded the market for energy efficiency services. Several grantees signed onto SVEW's nonprofit Direct Install program, receiving energy audits and retrofits in their own facilities. SVEW also recruited grantees to market its ongoing low- and moderate-income residential programs. This also enabled grantees to stretch their program funds further, as they learned that they would not have to provide redundant resources to homes or facilities served by existing utility-funded programs.

3. Challenges

While the CECG experienced overall success in meeting the grantees' campaign goals, building the capacity of grantees, and delivering energy efficiency resources to a substantially broader audience than either PG&E or SVEW alone could have accomplished, challenges did emerge and should be considered for future efforts:

1. ***Timeframe:*** With few exceptions, the campaigns would benefit from extended timeframes to hone strategies. Those with strict internal deadlines, such as Rebuilding Day or the annual Greenlight Film Festival, tended to cope well with the short grant timeframe.

2. ***Resource Intensity:*** SVEW spent extensive staff time learning about the organizations, target populations, and outreach strategies, and finding creative linkages among programs and public resources. Utilities or public agencies considering this program model should prepare for a resource-intensive launch period.

3. ***Organizational Barriers to Collaboration:*** Collaboration opportunities are numerous, but organizations often lack the resources to pursue them. For example, CTC's campaign hinged on conducting home performance audits to provide vocational students with the hands-on assessments required for graduation. Sacred Heart and the Asian American Center provided outreach to low-income communities where residents lacked access to rebated utility services. Collaboration would have helped CTC reach their goals more easily, and enabled the others to provide an enhanced continuum of services. However, staffing changes at CTC and time constraints in general precluded collaboration.

4. ***Utility Data:*** Several grantees had hoped to collect participants' utility bills to track success or provide additional teaching tools. Catholic Charities and Enlighten originally planned to have students bring their families' bills for use in classroom activities, and GEA looked to track savings from bills. In all cases, the small sample sizes and short time frames would have precluded usable data. Furthermore, garnering parental support for bills to be collected and analyzed proved prohibitive. Program planners should work with utilities to pool smaller campaigns, establish reliable control samples, and ensure that campaigns can operate over time horizons that enable adjustments for seasonal variability in energy use.

Conclusions and Next Steps

Part of the strength that CBOs bring to public energy efficiency program frameworks is the ability to integrate multiple community needs and complex responses into single, coordinated initiatives. More customers are engaged and retained as a result. By establishing implementation partnerships with local agencies, the CECG enabled SVEW to identify and address pre-energy efficiency barriers (such as lack of information or sub-standard housing), as well as to directly target non-energy benefits (such as public health and community cohesion).

In contrast, standard utility-funded energy efficiency programs, including local government partnerships, require performance to be measured through cost effectiveness tests that cannot account for the social benefits of reaching

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marginalized communities or of addressing multiple needs through comprehensive programs. It should be noted that the very comprehensiveness that strengthens CBOs stems from their ability to leverage multiple funding sources. Thus, evaluation frameworks that can account for complex combinations of resources and goals are needed.[9]

To maximize resources, implementation frameworks leverage multiple partners' strengths so that work is not duplicated and retooling is minimal. Government and utilities have expertise in energy efficiency policy and technology, as well as financial resources and regulatory mandates. Local agencies have intimacy with target communities, deliver innovative and integrated services, and easily adapt to shifting resources.

Grantees with extensive prior energy efficiency experience did not exhibit more success in achieving their goals. On the other hand, those with a combination of innovative outreach, community trust, and robust organizational structures had the most overall success in reaching their goals. Policymakers seeking to apply the CECG model should keep in mind an appropriate allocation of organizational assets, utilizing community agencies for their complementary strengths.

Our analysis suggests some specific combinations of organizational structures and implementation strategies that are especially well suited to the CECG delivery model:

- Small local government agencies combining diverse goals or mandates into single targeted initiatives
- Non-traditional education programs applying new curricular themes, which are linked to broader community outreach
- Locally respected programs whose missions can easily incorporate energy efficiency, and that utilize volunteers for brief yet high-impact campaigns
- Entrenched grassroots organizations that provide multiple services tailored to their communities' needs

The CECG pilot demonstrates that government-utility partnerships can provide sufficient oversight and appropriate assistance to local agencies to facilitate consistent messaging and effective implementation. The following factors appear most critical in facilitating effective integration with utility and regional goals:

- Partnerships with a diverse range of providers
- Continuous, non-invasive program monitoring
- Early provision of core messages, technical resources, and CBSM training
- Accessible, facilitated frameworks for collaboration and communication
- Longer time frames combined with frequent milestones to encourage continuous improvement

The CECG provides an in-depth exploration of the merits of using public energy efficiency funds to support a diverse network of local implementers. It also illuminates the types of agencies, organizational structures, and outreach strategies that may be best suited to deliver local behavioral energy efficiency programs to diverse populations. As policymakers move closer to recognizing the critical role for behavioral approaches in advancing energy efficiency, we hope they will recognize the ways in which local entities, including small municipal agencies and CBOs, can be leveraged to achieve those goals.

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Notes

[1] Statewide goals include the 2006 Global Warming Solutions Act (AB32) and the California Energy Efficiency Strategic Plan, adopted in 2008 by the California Public Utilities Commission.

[2] Consistent with existing literature, this paper defines behavioral programs as programs that target "behaviors associated with the purchase and installation of energy efficiency technologies as well as behaviors, decisions, and actions that might be thought of as more independent of technology. These include energy use habits, lifestyle, choices, and consumption patterns" (Ehrhardt-Martinez & Laitner, 20009, p. iii). Behavioral programs encompass traditional outreach and education, installation or distribution of basic measures to incentivize subsequent technology adoption, and strategies to enable or encourage access to existing resources. Behavioral programs may target immediate actions or long term habit changes.

[3] The potential magnitude of energy savings and GHG emissions reductions from behavioral programs are discussed in numerous studies, including Hummer (2010); P. Erickson (2011); Wei et al (2011); Dietz & Stern (2002); and McKenzie-Mohr (2011).

[4] D-10-04-029 (April 8, 2010), "Decision Determining Evaluation, Measurement and Verification Processes for 2010 Through 2012 Energy Efficiency Portfolios."

[5] Further discussion on the importance of local leadership can be found in Waddell (2000) and Checkoway (1997). Bockmeyer (2000) provides a compelling discussion of the distrust felt by marginalized communities of government programs. For further discussion on community participation, see Ross (2000).

[6] Mackres et al (2012), Waddell (2000), and others indicate the importance of grassroots CBOs in reaching hard-to-reach populations.

[7] Between 1990 and 2000, the city's Vietnamese population doubled, from 40,000 to 80,000. See http://www.sanjoseca.gov/planning/census/briefs/race_ethnicity.asp

[8] Joint Ventures Silicon Valley Network, Index of Silicon Valley 2012.

[9] Mackres et al (2012) call for diverse program networks and multiple stakeholders in delivering community-based programs, and of incorporating non-energy benefits into community energy efficiency programs.

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Grantee Snapshot

Agency and Campaign Name	Campaign Description	Target Population	Campaign Activities
Acterra Green@ Home	Performed HouseCalls in a neighborhood where trained volunteers employed numerous community-based social marketing strategies; educated residents on energy efficiency, conservation, and curbing climate change; and installed energy- and water-efficient devices.	Winchester neighborhood (San José) residents	Intense outreach, workshops, events, volunteer training, resident education, in-home device installation
Alviso Neighborhood Group Creating Sustainable Communities	Provided workshops for adults and children and distributed energy saving starter kits to promote increased energy saving awareness in a mostly Spanish-speaking community.	Alviso neighborhood (San José) residents	Canvassing, adult and children workshops, events, energy efficiency starter kits
Asian American Center of Santa Clara County Vietnamese Community Energy Savings Project	Educated otherwise isolated communities on energy efficiency concepts and savings opportunities; connected income-qualified households with means-tested, federally funded programs; and integrated energy efficiency resources while addressing other social service needs.	Vietnamese, Burmese, and Spanish speaking communities across Santa Clara County	Events, workshops, summer youth program, media advertisements (TV, radio, newspaper)
Boys & Girls Clubs of Silicon Valley Silicon Valley Energy Fair	Trained youth to be energy ambassadors and partnered with local businesses and organizations to promote, organize, and hold a neighborhood-wide energy fair.	East San José neighborhoods	Youth training, community workshops, sponsor and participant outreach, hosted event
Catholic Charities of Santa Clara County CORAL Energy Champions	Incorporated an energy efficiency thematic unit into the CORAL afterschool program at ten school sites through structured literacy activities, in-class discussion, and hands-on demonstrations.	Elementary school youth from Santa Clara County School Districts	Literacy based curriculum, hands-on activities, field trips, student surveys
Center for Training and Careers Energize Now	Trained students to conduct hands-on audits needed to complete HERS II certification. Provided community educational workshops and free audits to low-income households.	Single family home owners and renters and multifamily housing units	Home energy audits and installations, vocational training
City of Cupertino GreenBiz Cupertino	Built capacity, offered incentives, and supported business enrollment in the Santa Clara County Green Business Program. Addressed greenhouse gas emissions through energy and water conservation.	Small and medium sized businesses and restaurants in the City of Cupertino	Business energy audits, certification checklists, resources, supporting services
City of Cupertino Growing Greener Blocks	Engaged neighborhoods in the suite of city services to support energy efficiency, materials management, water conservation, and financial savings. Trained volunteer community leaders and hosted neighborhood workshops and Energy Sweeps.	Cupertino residents, neighborhood Block Leaders	Block parties, house parties, Neighborhood Energy Sweeps, workshops, in-home device installations
CreaTV San José Cortese Climate Kids	Produced six episodes of a new children's program based on concepts from County Supervisor Dave Cortese's Climate Kids Club. Episodes feature different environmental topics and things that kids and families can do to conserve energy and resources.	Elementary youth throughout Santa Clara County	Broadcast media, school visits

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Agency and Campaign Name	Campaign Description	Target Population	Campaign Activities
De Anza Community College Energy Management Technician Lab Teams	Built and equipped a lab to train students in energy efficiency monitoring, data collection, and analysis. Students used De Anza campus facilities to understand equipment, systems, and building envelope science. Students interned with neighboring cities and provided benchmarking, data analysis, and energy audit services.	De Anza Community College students, northwest Santa Clara County businesses and organizations	Technical training, hands-on practical lab, student internships
Enlighten Culture and Education Foundation Enlighten Energy Watch Promotion	Developed and implemented an English-Mandarin energy efficiency themed curriculum for after school Chinese students. Taught students to advocate energy efficiency in their communities.	Chinese K–12 students and families	Art projects, classroom education, video projects, competition, events
Green Energy Agents Youth Energizing Communities	Trained youth and youth leaders to become energy efficiency and conservation ambassadors in their communities.	Youth ages 12–18 in various youth and faith based organizations	Environmental, youth leadership training, product sales
Midpeninsula Community Media Center Greenlight Film Festival	Broadened the reach and educational impact of the Greenlight Film Festival to include a new "Community Energy Champions—Conservation and Efficiency" award. Attracted more student entries from Santa Clara County cities beyond Palo Alto. Provided educational materials based on the winning film to interested teachers throughout Santa Clara County.	Youth in grades 6–12 and teachers throughout Santa Clara County	Energy efficiency educational package, film festival event, technical assistance
Rebuilding Together Silicon Valley Resource Coordinator Training	Trained volunteer resource coordinators to provide energy efficiency education, upgrades, and resources to low-income senior and disabled homeowners.	Santa Clara County low-income homeowners	In-person and online volunteer training, in-home device installation and resident education
Sacred Heart Community Service Sacred Heart Saves Energy	Increased energy efficiency awareness and participation in weatherization and bill assistance programs in low-income minority neighborhoods. Conducted neighborhood based outreach and "Do-it-Yourself" energy efficiency workshops.	Four low-income, multi-lingual, San José neighborhoods	Door-to-door canvassing, workshops, federally funded program intake
San José State University Green Ninja Energy Reduction	Developed an online home energy reduction contest and accompanying lesson plans for school grades four through twelve. The contest was themed around the adventures of the animated superhero, Green Ninja.	Youth and teachers, grades 4–12	Teacher outreach, online contest, teacher resource kits, lesson plans
Zero1: The Art & Technology Network Healthy Art	Educated artists about eco-friendly art. Built capacity within the artist community to use energy efficiency and eco-friendly practices by conducting environmental assessments of studios and replacing toxic or inefficient tools and materials. Installed art created with new non-toxic and energy efficient materials and processes at a public exhibit.	Artists throughout Santa Clara County and public interested in art	Energy and toxicity audits, workshops, installation, social media

Community Energy Champion Grantee Case Study

Acterra ACTION FOR A HEALTHY PLANET

Acterra Green@Home

About Acterra

Acterra, an environmental nonprofit serving Santa Clara and San Mateo counties, provides hands-on activities and programs to improve and protect the environment and offers volunteer opportunities each year for adults and youth. Acterra launched Green@Home in 2007, and has performed over 1,500 HouseCalls to date.

CECG Focus: Acterra focused promotion of Green@Home in San José's Winchester neighborhood, comprised of low- to moderate-income residents.

Website: acterra.org

Campaign Accomplishments

- Carried out persistent neighborhood-based social marketing efforts including door-to-door canvassing, home energy efficiency workshops, apartment "blitzes," and recruitment events
- Trained 20 volunteers to conduct outreach; to educate residents about home energy conservation, reducing air pollution, and curbing climate change; and to install home energy efficient devices
- Performed 60 Green@Home HouseCalls in the Winchester neighborhood, resulting in an estimated annual savings of $41 to $158 per home.

Acterra's campaign piloted an intensive neighborhood approach to increasing energy efficiency awareness and personal action. Acterra built the volunteer base for this project from their pool of existing volunteers and by recruiting community members. After completing eight hours of training, volunteers were ready to perform a two and a half hour home assessment (a "HouseCall") that included installation of basic energy-saving devices, training in interpreting utility bills, and other energy education. At the end of each HouseCall, residents signed a pledge to complete further steps to become more energy-efficient. The volunteers followed the visits with phone calls to determine whether residents found the visits helpful and whether they followed through on their pledges.

Community Based Social Marketing and Basic Energy Upgrades

Using principles of community based social marketing (CBSM), the Green@Home campaign promoted a new social norm that prizes energy awareness and practices among residents in the Winchester area. Specific installed measures included a retractable clothesline, light switch gaskets, CFLs, weather-stripping for one door, a refrigerator thermometer, faucet aerators, and low-flow showerheads.

While residents directly benefit from these simple measures, Green@Home's main goal is using such home energy education and commitments to motivate individuals to make further changes. Volunteers use Kill-A-Watt® meters to explain plug loads and standby power, and review an 80-point checklist with the residents. They recommend further energy-saving retrofits such as insulation, smart power strips, or appliance upgrades, and suggest habit changes, such as washing clothes in cold water. Volunteers help residents understand their utility bills and assist with creating an online PG&E account if desired. Residents receive information about rebates and other local environmental programs such as recycling, household hazardous waste disposal, and water conservation.

Finally, residents are asked to commit to five other personal actions that they will make in the two months following the visit. Developing personal commitments through the peer-to-peer relationship between volunteer and resident is a core and lasting element of Green@Home. CBSM research finds that such one-on-one conversations and specific commitments are critical to prompting behavior change—more so than written materials, media campaigns, or Internet-based information.

Acterra
Green@Home

Persistent Outreach

People need frequent visual impressions of a program or organization name to understand, trust, and recall it. Acterra employed mass flyer distribution, target group meetings, and social media to ensure that as many residents as possible would learn its name and sign up for Green@Home.

On January 28, 2012, 18 volunteers distributed flyers to 1,900 homes in the Winchester area. This was the program's first large outreach activity in the neighborhood and quickly resulted in 12 HouseCalls. As a community event, the walk brought volunteers and residents together in the interest of saving energy, and created more personal engagement with residents than anticipated. It was a sunny Saturday morning, and many residents were outside, giving volunteers the opportunity to personally promote the program. Many of those who signed up noted that individual conversations with volunteers triggered their interest.

Acterra staff worked closely with two area residents who became strong advocates of the program. Campaign representatives presented the program at two neighborhood association meetings and three community events. This direct contact built a trusted relationship with the community, as representatives answered questions and scheduled HouseCalls on the spot. Whenever possible, the same representatives attended neighborhood events and performed follow-up HouseCalls to show continuity for program participants.

One particular form of marketing—program write-ups in various city and neighborhood association newsletters—contributed to an increase in HouseCall signups. Spikes were seen each time Green@Home was featured in city updates, emails, neighborhood newsletters, local websites, and the local city councilmember's newsletter. These were an important mode of outreach for those residents who might not attend neighborhood association meetings but who still read and trust the material distributed by the neighborhood association. The write-ups included testimonials quoting named residents who had received HouseCalls. This marketing took little staff time, and led to a rise in HouseCall signups once published.

Yard signs were another key CBSM strategy, which Acterra staff felt resulted in many program referrals. The signs prompted neighbors to converse about the program and about energy savings, once again passing along program information through trusted sources. Acterra asked residents to call when the signs were no longer wanted, enabling responsible reuse of the signs.

Similarly, program participants signed a pledge at the end of the HouseCall stating that they would spread the word about the program within their community. The combination of these strategies brought the program important validation, enabling it to gain momentum throughout the community beyond the capacity of direct outreach.

Apartment Building "Blitzes"

Acterra also used this campaign to pilot a new approach to reaching renters in multifamily buildings. Green@Home outreach generally hinged on communication through organized neighborhood associations, community events, and direct homeowner outreach. As such, HouseCall requests from renters were rare. Despite efforts to clarify that HouseCalls were available to both renters and homeowners, renters often remained uncertain as to whether the service applied to them. Many of the apartment complexes in the Winchester area are home to lower-income Latino residents, who were particularly interested in learning how to save

Acterra
Green@Home

energy. The "blitz" model was a way to reach apartment dwellers and enabled volunteers to perform multiple HouseCalls in one day.

To organize a blitz, Green@Home contacted apartment managers or landlords of six complexes. After describing the free program, volunteers found the managers willing to promote the program to their residents. Blitzes were then scheduled about three weeks after the initial contact. Before the blitz, volunteers, including fluent Spanish speakers, walked door-to-door to distribute flyers and to talk to residents, in some cases accompanied by the apartment manager. Signing up residents in person was more time consuming than simply posting flyers, but it ensured that residents understood the program and generated more participation.

The same representative who initially spoke with each resident was present the day of the blitz, so that residents could associate the familiar face with the program. The blitz model also had logistical benefits. Since HouseCalls in apartments were conducted quicker than those in single family homes, and because of the physical proximity, volunteers were able to conduct multiple visits in one day.

Overall, the blitz approach was beneficial because a high proportion of residents were notified and used the service. Many apartment residents, who had low or moderate income, saw significant energy savings on their utility bill following a HouseCall. Acterra staff completed 21 apartment HouseCalls, which their staff estimate will result in total savings of 4,566 kWh per year and between $689 and $2,584 in annual utility bill savings, or an average of 217 kWh and $78 saved per apartment per year.

Volunteer Engagement

Central to the Green@Home model was performing HouseCalls in an interactive way. Two volunteers attended each HouseCall. One engaged the resident in energy-related discussions while the second volunteer conducted the physical assessment and installed measures. A sense of community-building was inherent in this practice, as volunteers worked with residents to convey the social value of reducing energy use and helping the environment. As residents received the information and recommendations from another member of their community, they saw that working toward energy reduction was worthy of volunteer time.

Green@Home engaged volunteers in the campaign from the beginning by encouraging them to sign up for HouseCalls in their own homes, distribute program flyers, and recruit their friends and neighbors into the program. As a result, volunteers acutely felt their involvement impacting the program's success.

In February 2012, Acterra created a "Featured Volunteer" section on their website to highlight those who went beyond Green@Home's expectations. In six months, they featured three different volunteers, one of whom was crucial to the success of the Winchester campaign. The most recent Featured Volunteer completed all of the campaign's follow-up calls for the past year and a half, better enabling Green@Home to gauge resident satisfaction.

Challenges and Lessons Learned

When surveyed, Winchester residents engaged in the program provided an average satisfaction rating of 9.1 out of 10. Green@Home's key challenges were related to two outreach factors. First, Acterra, based in Palo Alto, had done limited work in San José prior to this campaign and was virtually unknown in the Winchester area. Second, Acterra's initial outreach strategy hinged on promoting the program through the Winchester Neighborhood Action Coalition (WNAC). Unfortunately, WNAC dissolved in late 2011 due to a loss of funding. Acterra was forced to target outreach to smaller, individual neighborhood associations that had erratic newsletter and meeting schedules and an

Acterra
Green@Home

inconsistent web presence. While the campaign succeeded in establishing relationships with most of the individual neighborhood associations and achieving its goal of 60 HouseCalls, this situation quadrupled the necessary outreach efforts.

Moreover, WNAC had championed the name "Winchester Neighborhood." In WNAC's absence, it appeared that many residents did not relate to a "Winchester Neighborhood." Thus the sense of place and belonging, critical to a geographic campaign, was limited. For example, residents who did not realize that they lived within the neighborhood boundaries may have believed they were ineligible for the program. All outreach therefore had to include the name of each individual neighborhood within Winchester. To ameliorate this issue, towards the end of the campaign, Acterra decided that any resident with a San José mailing address could receive a HouseCall. The precise effect of this confusion and its remedy on signups is unknown.

The area's socioeconomic diversity further challenged outreach. In each micro community, the campaign's outreach strategy had to address the program benefits that mattered to most to that population. For instance, residents of apartment complexes in one neighborhood expressed interest because their refrigerators weren't working properly, and they were having trouble getting their landlord's attention. Thus, Green@Home representatives emphasized operating appliances efficiently rather than reducing standby power of electronics. Constantly updating the campaign's messaging delayed the campaign, but reinforced the central principles of CBSM. As an organization rooted in CBSM, Acterra took the time to understand the various communities that comprised their target area, and to determine whether there was a single way to promote the program to all populations simultaneously. It soon became clear that tailoring outreach to smaller communities through targeted marketing and personal contact was most effective, and well worth the increased staff and volunteer time.

An essential step toward a successful blitz was identifying and contacting apartment managers whose endorsement of the program provided more credibility with residents. Many of the complexes exhibited a strong sense of community, with more trust in apartment managers than expected. Approaching apartment managers in person was crucial to the campaign's success.

Based on an understanding that people learn about outreach programs through a multitude of sources, and often don't respond until they've seen a name five to seven times, Green@Home promoted its offerings and name through multiple avenues. The program prioritized opportunities for personal contact between residents and program representatives. Green@Home staff and volunteers encouraged residents to talk to neighbors about the program. Particularly in Winchester's Lynhaven neighborhood, Green@Home slowly became a well-known name. In the final months of the campaign, residents approached Acterra booths at community events, and said they had been eagerly awaiting a chance to sign up.

In all, the broad array of outreach strategies Green@Home took in the Winchester area enabled completion of 60 HouseCalls. Acterra estimates that it saved a total of $41 to $158 per residence per year. By Acterra's calculations, this translates to 42,071 lbs of CO^2 per year, or about 809 lbs of CO^2 per residence per year. Acterra also estimates that their campaign will save an average of 15,485 gallons of water per residence per year.

Beyond energy, money, and water savings, Green@Home's emphasis on personal contact also helped build a sense of community throughout Winchester centered on energy conservation, environmental stewardship, and climate change mitigation. Its success also reflects that these values are becoming accepted social norms.

Community Energy Champion Grantee Case Study

Alviso Neighborhood Group
Creating Sustainable Communities

About Alviso Neighborhood Group

The Alviso Neighborhood Group (ANG) was founded in 2010 by a small group of community-minded neighbors whose purpose for organizing was to drive issues unique to their community through the City of San José's political system and to ensure their voices were given equal consideration. ANG advocates for neighborhood enhancement, enjoyment, and preservation and takes appropriate action on such matters as the Alviso Master Plan, land use, planning, safety, traffic, open space, parks, and recreation.

CECG Focus: ANG launched the Creating Sustainable Communities initiative to promote environmental awareness and home energy savings.

Campaign Accomplishments

- Engaged 18 adults and 90 children in energy efficiency educational workshops
- Systematically employed numerous social marketing methods in order to identify the best approach to engage families in a small (population 2000), predominantly Spanish-speaking, low-income community, regarding the environment and energy use
- Provided a clearer picture of the complex energy-related needs and motivations of Alviso families

ANG used a combination of education, community discussion, and incentives to reach members of the Alviso community. They arranged a series of workshops targeting adults and children. Each adult attendee was given an energy saving starter kit and shown how to install and use the energy saving devices. De Anza Community College interns were recruited to create the children's workshops, and volunteers assisted in creating material for the Spanish-speaking segment of the community. The volunteers received energy efficiency training as well.

Using Social Networks to Engage Isolated Communities

Alviso is a small, geographically isolated neighborhood near the shoreline of the southern San Francisco Bay. It is home to approximately 500 families, many of whom are low-income immigrants. At a high level, this campaign was modeled on the Acterra Green@Home program (another Community Energy Champions Grant recipient). The lead implementer was trained by Acterra and used similar materials for the workshops and home energy kits.

The campaign's focus was to educate children and families about energy and environmental issues, and workshop preparation and delivery were the main activities. Varied outreach methods were used to attract attendance. While the campaign led workshops for 90 children through a partnership with the Alviso Boys & Girls Club, only 18 people participated in the adult workshops.

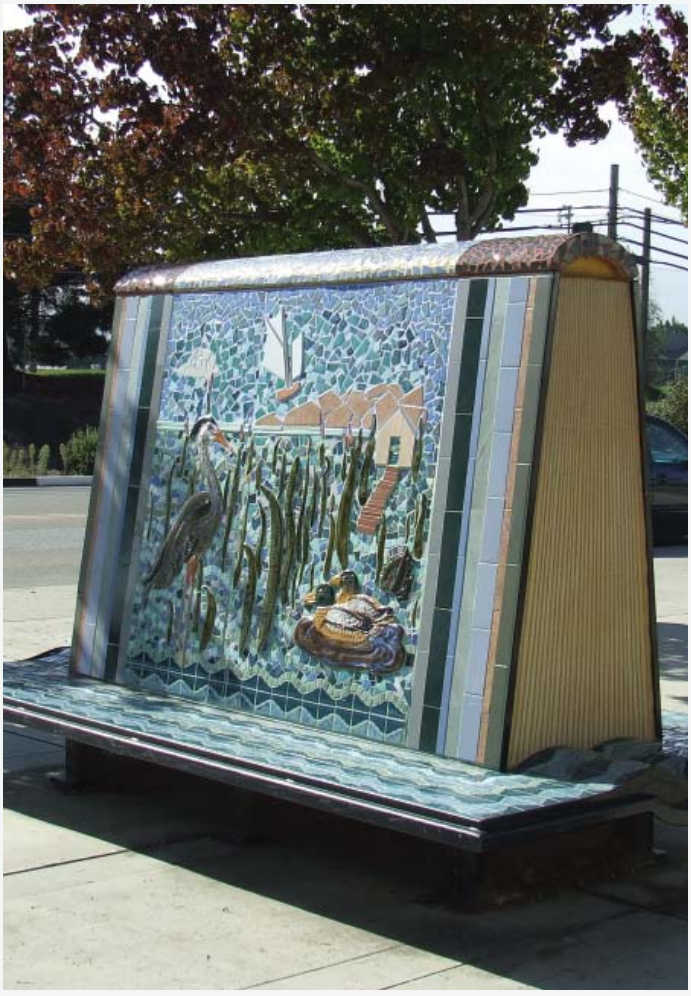
The first children's workshop took place at the Alviso Youth Center Boys & Girls Club in December 2011. The program included a viewing of the film "The Lorax," a reading of *The Giving Tree*, and an activity on Energy and Water Usage. All activities included discussion. Parents were asked to follow up with the lesson by joining the "Alviso Energy Champions" Facebook page to document how their child incorporated the lesson into their daily activities. Once 35 entries were submitted to "Alviso Energy Champions," the Boys & Girls Club children would be rewarded with a pizza party. However, only one parent joined the Facebook page.

The hour-long adult workshop addressed climate change and human impact, energy efficiency, and conservation, and educated adults on simple behavior changes that mitigate climate change, create jobs, save money, ensure resources for the future, and create a healthier environment. Energy Saving

Alviso Neighborhood Group
Creating Sustainable Communities

kits, distributed at the end of the workshop, contained a reusable shopping bag, an energy efficient night light, a retractable clothesline, faucet aerators, a low-flow showerhead, a shower timer, toilet tank dye tablets, a smart power strip, and CFLs. Participants were encouraged to follow up with an email that included a picture of the item(s) in use in order to receive a $10 gift card. Workshop leaders also offered to conduct a home visit to photo document incentive kit usage or to assist with product installation. However, participants expressed little desire to have follow-up visits from workshop leaders, and only one followed up with a photo of her installed clothesline.

Those who did attend the adult workshops provided valuable feedback. They indicated that the workshops created a place where they could share their ideas for energy conservation and sustainable lifestyles. Adult workshop attendees voiced satisfaction with the material, stating, "I can do this at home."



Experiments in Outreach and the Value of Collaboration

The Alivso Community provides an important example of the vital role of community based social marketing in reaching a unique community. The campaign experimented with several strategies for garnering workshop attendees. Campaign staff used their relationships with other Alviso community leaders to spread the word about the workshops. In addition, flyers were provided to churches, community organizations, and handed out at the Santa Visits Alviso Foundation event in December 2011. The campaign also leveraged an "Alviso Neighborhood Group" Facebook page, parent information packets at the local elementary school, announcements in community meetings, booth presence at several community events, blurbs in the county supervisor and city councilperson email lists, and local email trees.

The Alviso campaign leader also secured support from the Santa Visits Alviso Foundation, a nonprofit charitable organization, as a 501(c)(3) sponsor for the Community Energy Champion Grant funds. This partnership, coupled with an existing network of both public and private agencies, helped get the word out to other organizations to enlist their support.

Staff used a variety of methods to conduct outreach to the local Hispanic community. Describing the process as "trial and error," staff tailored the outreach material to various groups (elementary school, church, community group email lists, social media page, city/county email lists, posting flyers at local venues, and on cars, etc.) to find out which methods worked best. No single method brought in the desired attendance, but the most successful approach was distributing flyers in the weekly information packets that go home with George Mayne Elementary students. An investment of 300 flyers there resulted in eight workshop attendees.

Knowing the people who were responsible at the local school, daycare center, and local Boys and Girls Club helped program staff to conduct outreach to the local children and their parents. The school staff at George Mayne Elementary School were particularly helpful in guiding the campaign leader through the necessary steps required to sanction workshop flyers through the Santa Clara Country Unified School District. In addition to distributing flyers, the school staff helped secure "Energenius" study materials (a specialized energy curriculum for elementary-aged children) from PG&E.

In a different type of partnership, working with De Anza College interns brought a level of quality and expertise to the children's workshops. An existing relationship with a De Anza

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Creating Sustainable Communities

College instructor enabled campaign staff to quickly grasp the requirements the instructor had of her students, and to effectively leverage their expertise and desire to engage with the community.

Approximately 100 Vietnamese families had children enrolled in the local elementary school. However, due to the significantly greater proportion of Spanish speaking residents, as well as limited staff time, no effort was made to translate the workshops and outreach materials into Vietnamese. Staff expressed willingness to do so in the future if resources were made available.

Challenges and Lessons Learned

The Alviso community has many multifamily homes, where multiple tenants occupy a single unit. This makes discussing energy savings more complicated than in single family homes or even multifamily complexes. Many tenants in these situations never see the utility bill, and they pay their portion directly to the landlord or primary tenant. The landlord may not live in the area, so getting them involved in needed repairs or energy upgrades can be challenging. Sometimes, even locating the "lead tenant" can be difficult. Finally, the tenants may feel that no matter how much energy they use, their percentage of the bill remains relatively constant, and therefore they alone cannot affect energy savings since that requires the cooperation of the other tenants in the house.

The campaign's biggest challenge was getting a committed volunteer to translate and lead the Spanish workshops. This was particularly problematic because it was unexpected. "I was quite surprised that I didn't have numerous volunteers early on. This one issue was one I really didn't anticipate considering Alviso is predominately Hispanic. I had assumed that considering the economy, high unemployment among young adults, and the generous stipend I offered, there would be more than enough volunteers. It turned out to be quite the opposite." Staff intended the majority of workshops to be geared to the Hispanic community in the neighborhood. Every effort was made to find a community volunteer for the job, but in the end a professional candidate was recruited. The lack of a dependable translator negatively impacted the campaign's ability to draw the Spanish-speaking community into the program.

Staff worked with community members to understand why it was so difficult to engage the Hispanic community. Suggestions included moving the workshops to evening/weekdays or evening/weekends, and changing the venue to locations that were more familiar (such as churches, local mobile home parks, or the local community center).

The Alviso campaign faced several challenges to engaging the intended volume of community participants. These included the usual reasons that similar environmental outreach initiatives face challenges engaging low-income and disadvantaged populations, such as the language barriers and challenging rental situations described above, as well as competing priorities and lack of awareness. Additionally, ANG is a volunteer association, without the clout that may accompany slightly larger, longstanding, or "official" organizations. ANG's initiative was the most grassroots campaign among the Community Energy Champions grantees, and its goals included preliminary spadework to establish effective outreach methods. As such, it may benefit from official partnerships with larger community environmental organizations and from a longer time horizon to adjust strategies and build awareness of the program.

Asian American Center of Santa Clara County
Vietnamese Community Energy Savings Project

About Asian American Center of Santa Clara County

Founded in 2002, Asian American Center of Santa Clara County (AASC) is a nonprofit community based organization that provides comprehensive social and advocacy services. It provides support services to families and individuals by promoting education, health, safety, economic success, and cultural and generational connections.

CECG Focus: AASC delivered energy and money-saving services to Vietnamese, Burmese, and Latino communities across Santa Clara County who spend a large portion of their income meeting energy needs.

Campaign Accomplishments

- Increased awareness and knowledge of energy efficiency issues to the most economically burdened and isolated Vietnamese, Burmese, and Latino households in San José
- Provided diverse outreach and education for energy efficiency and home energy assistance resources, including community events, workshops, a Vietnamese language media campaign (TV, radio, and newspaper), and home visits
- Assisted families with completing forms for means-tested energy and bill assistance programs, including over 500 applications for California Alternate Rates for Energy (CARE) and the Low-income Home Energy Assistance Program (LIHEAP)

For more than 10 years, AASC has served low-income, hard-to reach Vietnamese, Burmese, and Hispanic immigrant populations in San José. Because AASC had addressed multiple social service needs of their target population, implementing outreach for energy saving resources was a natural fit. The Vietnamese Community Energy Savings Project educated families about energy efficiency from perspectives of environmental health and financial savings. They provided resource connections to help low-income and minority populations save energy, pay their bills, and access related resources.

AASC used a combination of media, cultural events, and workshops to disseminate information. Their messages reached hundreds of community members directly as well as a wider audience through Vietnamese newspapers, radio stations, and television channels. During the campaign, the agency received hundreds of calls about energy assistance and weatherization programs triggered by media outreach. AASC helped callers fill in and submit utility bill assistance forms; this effort gave staff more opportunity to discuss energy saving steps with clients.

Building Trust

For a majority of recipients, this campaign was the first time they had encountered energy efficiency messaging. Several factors make the Vietnamese immigrant population hard to reach. Mistrust in government programs and reluctance to give out personal information are common. Indeed, minority and hard-to-reach communities—seniors, non-English speakers, new immigrants, and other isolated communities—are often only comfortable receiving information from (and sharing information with) those familiar to them, such as family, doctors, neighbors, and spiritual leaders.

AASC staff have worked hard to be part of that inner circle and gain the trust of the communities they serve. As they conducted outreach, they discussed the personal and household benefits of energy savings, explained the resources available, and provided token energy products as incentives. As a trusted emissary of public and utility programs, AASC succeeded in making the programs feel less foreign and more accessible to the community.

Due, in part, to that lack of comfort with public agencies, many among the target population were unfamiliar with applying for public programs. AASC assisted with filling in the forms, answered questions, and ensured that the forms were routed to the correct organizations. This approach "demystified" the process. Residents learned about the enrollment process, lost their apprehension of government funded programs, and learned how to directly access needed information.

Asian American Center of Santa Clara
Vietnamese Community Energy Savings Project

Raising Awareness at the Grassroots Level

AASC used a handful of strategies to raise awareness:

Events: AASC promoted energy efficiency at numerous community events. The Mid-Autumn Festival, held in conjunction with the Miss Vietnam Pageant of Northern California, drew more than 1,000 attendees. For this event, AASC collaborated with the Center for Training and Careers (CTC, another CECG grant recipient), to have a dedicated energy efficiency outreach booth. AASC and CTC handed out more than 750 items, including printed materials, gift bags, and incentives such as CFLs and shower timers. Over 200 community members signed up to receive further information about home energy assistance programs. In another successful event, AASC collaborated with First Holy Trinity Church to organize a Halloween event, aimed at reaching the Burmese community.This event attracted more than 300 attendees. AASC distributed energy assistance materials, conducted an energy assistance workshop for 15 interested families, and provided the children with fun, energy-themed activities.

Workshops: AASC raised awareness through a series of workshops held at a neighborhood association, five churches including the Vietnamese Christian Church and Burmese Methodist Church, the Mexican/Atzlan New Year celebration, and City Clean Up Day. More than 130 attendees received energy efficiency education and referrals to PG&E's Energy Savings Assistance Program. AASC staff explained the savings potential of various habits and products. They distributed incentives (CFLs, faucet aerators, low-flow showerheads, and informational booklets) to those who stayed for the entire presentation, provided contact information, and gave feedback on what they had learned. For most attendees, this was the first time they heard about energy savings opportunities.

Media Campaigns: Since most Vietnamese Americans in San José are refugees and immigrants who depend on ethnic media for news and information, AASC conducted a Vietnamese media outreach campaign to raise awareness of PG&E's energy assistance programs. Advertisements were placed in several outlets including Vietoday Television, 26.5 KTSF, *Thoi Bao Daily News*, *Viet Weekly* magazine, and Vietnamese Northern California Radio. Newspaper ads also ran on a weekly basis for seven months. Since launching the media campaign, AASC has consistently received at least six calls a day inquiring about energy efficiency programs, with 96 percent reporting hearing about the energy saving programs from one of the media outlets.

Youth Education: Observing that children have great influence over their parents when it comes to saving energy, AASC incorporated an energy efficiency unit into their 2012 summer program curriculum. This program taught and reinforced concepts with students ages nine to 12 about energy efficiency, conservation, and recycling.

Home Assessments: In a less successful element of their campaign, AASC learned a critical lesson about providing energy efficiency services in struggling communities. They originally intended to conduct basic energy assessments in low-income homes and apartments, which seemed a natural next step following the events and workshops. The assessments were meant to determine which homes would qualify for a full audit or installation, conducted by skilled CTC students. Upon conducting just a handful of assessments, staff uncovered a host of safety issues that precluded standard energy efficiency upgrade services. These included high carbon monoxide toxicity levels, plug load extremes, inoperable stoves, and other health and safety issues that needed to be addressed prior to any other work. The experience underscored the need for a comprehensive social services approach to energy efficiency in communities facing multiple disadvantages.

Asian American Center of Santa Clara
Vietnamese Community Energy Savings Project

Partnerships and Referral Networks

AASC has an ongoing partnership with Second Harvest Food Bank to assist clients with applying for emergency food. Through the Energy Savings campaign, AASC began combining this process with application assistance for PG&E's California Alternate Rates for Energy (CARE) program. This combination of resources helped AASC to complete approximately 525 CARE applications over the course of the campaign.

Being a hub of energy efficiency information meant first understanding which organizations provided the services that their population needed, and then building strong relationships with those agencies. When referring a client to outside organizations, AASC found that it first needed to understand how the client would be dealt with after the referral; they also needed to be aware of their responsibilities as the referring agency. Unfortunately, several referrals were made to other nonprofit providers before these prerequisites had been met, resulting in confusion and frustration on both sides. Referrals to PG&E received better responses in terms of immediate follow-through. Moving forward, AASC hopes to strike similar relationships with other local resource providers, particularly Sacred Heart Community Service, CTC, and the Salvation Army.

Challenges and Lessons Learned

AASC had earned their community's trust over the 10 years of their existence. When this campaign launched, the client population was primed to come to them for energy assistance. In fact, the level of unmet need exceeded the agency's capacity. Many residents had never heard of bill assistance or weatherization. It became time-consuming for staff to explain the services and terms. Moreover, because of their trust in the agency, community members expected AASC to not only assist with filling in applications but also to provide all direct services, be it auditing, weatherization, or measure installation.

AASC's role and area of expertise is conducting outreach and raising awareness of existing resources. Conducting referrals in a particular area, such as energy efficiency, is a strength that a community agency must build over time. The agency must reassure the community that referrals will be timely, safe, and fruitful; in essence, they must play the role of interim case manager until clients successfully receive services elsewhere. As AASC develops stronger partnerships with outside providers, their ability to refer callers or program attendees to the right agency and to follow through with those referrals will increase.

Establishing a strong referral protocol is particularly important when confronting multiple "pre-energy efficiency barriers." Updated lighting and insulation are not family priorities, and sometimes cannot be addressed at all in the face of pressing health and safety issues. Agencies addressing energy efficiency in challenged communities must triage needs, navigate complex responses, and work with individual clients over long periods.

Part way into the campaign, AASC relocated to a larger space with room for offices and a large hall to conduct meetings and classes. This enabled them to serve more clients, attract more volunteers, and hire more staff. Organizational growth and mission expansion lead to inevitable growing pains, and AASC's internal structure is evolving in response. This impacts their protocols and capacity for program documentation, reporting, and identifying proper contact people, all of which have evolved throughout the campaign. As these internal processes improve, AASC will be able to leverage more outside resources and thereby more effectively provide essential services to their population.

Community Energy Champion Grantee Case Study

Boys & Girls Clubs of Silicon Valley
Silicon Valley Energy Fair

About Boys & Girls Clubs of Silicon Valley

Founded in 1944, Boys & Girls Clubs of Silicon Valley (BGCSV) is a chartered affiliate of Boys & Girls Clubs of America and offers innovative and effective after-school and summer youth development programs for low-income, high-risk Santa Clara County youth. BGCSV serves more than 3,000 youth, ages six to 18, at 11 Clubhouse facilities in San José. BGCSV works to nurture young people's self esteem by instilling in them a sense of belonging, usefulness, competence, and influence.

CECG Focus: BGCSV implemented a neighborhood energy fair, involving youth, local businesses, residents, and local government support. In preparation, they implemented an environmental ambassador course for youth group members.

Website: bgclub.org

Campaign Accomplishments

- Trained Keystone Club youth to become informed energy ambassadors to their families and neighborhood
- Partnered with organizations and corporations to promote energy efficiency at a neighborhood energy fair for East San José residents
- Kicked off the "Club Green" initiative, a commitment to using and promoting green technologies, at the Smythe Clubhouse
- Became the hub of energy efficiency and conservation information within the surrounding community

BGCSV used an Energy Fair as the platform to inspire adoption of energy efficiency and conservation practices in the community surrounding their Smythe Clubhouse in East San José. The Club engaged youth, volunteers, community members, and staff to coordinate the event, held in May 2012. The fair included local organizations, businesses, and demonstrations of effective ways to reduce energy and the collective carbon footprint. Through the financial support and organizational collaboration of the Community Energy Champions program, and in coordination with other City of San José initiatives, the Clubhouse used the Energy Fair to kick off the "Club Green" initiative, encouraging members to become proactive energy efficiency ambassadors in the community.

The Keystone Club, a character and leadership development program for youth ages 14 to 18, became the driving spirit of the campaign. Prior to the fair, teen members received education about energy efficiency and environmental conservation from Green Energy Agents (GEA), another CECG recipient. Keystone Club members who became energy efficiency ambassadors mentored younger members and demonstrated their leadership and knowledge at the Energy Fair. The teens have continued to spread the message of energy efficiency in their community beyond the culmination of this project.

Youth Training and Empowerment

Members of the Keystone Club underwent a six-week training with GEA. The teens received hands-on education in energy efficiency principles and key products. They learned how to use, install, and sell energy efficiency products. At the end of the training, Keystone Club members used their newfound knowledge to teach 40 younger Club members about environmental and energy issues in a fun, hands-on demonstration. In an effort to be more accountable for personal environmental change, Keystone members also made specific personal commitments to the environment on a "commitment board," stating what they would personally do or change in their behavior. Those who participated in the commitment board activity have demonstrated a high adoption of conservation behaviors. Their newfound enthusiasm was apparent at the Energy Fair and afterwards in the Clubhouse, as they remind others to turn out lights and conserve water.

Boys & Girls Clubs of Silicon Valley
Silicon Valley Energy Fair

Community-City Collaboration

This campaign fell into a unique situation due to the Clubhouse's location within the target area of the City of San José's Better Buildings Neighborhood Program (BBNP). This federally funded program canvassed and weatherized many of the community's households. The Silicon Valley Energy Watch awarded the grant in part because the campaign's youth education and fair were complementary to the BBNP. BGCSV leveraged the outreach already being conducted in their community to market the Energy Fair. The lead BBNP organizer became an integral player in preparing the community aspect of the fair. The city team provided guidance on additional ways to promote the event in the neighborhood based on their ongoing outreach. They also helped identify potential community partners that would be a good fit for the fair, resulting in unexpected and important partnerships.

Challenges and Lessons Learned

The greatest challenge was attracting attendees to the Energy Fair. Staff knew that enticing neighborhood residents to attend an event like this would be challenging; yet even with direct mail flyers, neighborhood canvassing, and announcements in community center and church bulletins, attendance was lower than anticipated. After the fair, staff recommended that similar future events should be scheduled on a Sunday to encourage attendance from the nearby church congregation. They also suggested expanding the target audience to a wider geographic area.

The low attendance was surprising since the work previously done in the neighborhood by the BBNP would have primed the community to be excited about the Energy Fair. Possible reasons for the low attendance, in addition to an unusually high number of events held that day around the city, may have included a fatigue with energy programs among the residents who had been served by the BBNP over the previous year. Many of these residents had received multiple visits from related city and utility programs, including initial outreach, in-home education, free upgrades, and follow-up visits.

Collaboration presents its own challenges, even as it assists programs. This is particularly true at a campaign's outset. The BGCSV's campaign had multiple partners, each with a distinct role in the community with regards to home upgrades, outreach, campaign management, and public communication. Such a conglomeration of providers has the potential to provide long-term benefits to the community. Unfortunately, the brief nature of this campaign precluded

Boys & Girls Clubs of Silicon Valley
Silicon Valley Energy Fair

the time needed to iron out roles and responsibilities among providers. Among overworked local staff, this caused confusion at the program's outset, and resulted in missed opportunities for early momentum.

Despite these challenges, the campaign posted successful outcomes. Keystone Club members demonstrated increased conservation behaviors such as turning off lights when not in a room, taking shorter showers, and turning off the faucet while brushing their teeth. Furthermore, they are encouraging and reminding their family and friends to do the same.

One Keystone Club member started his journey at Smythe while attending junior high at a nearby school. Like other members, he came from a troubled background. He was reticent when GEA first visited a Club meeting to introduce the environmental project. But after several training sessions, and when GEA encouraged each member to make a commitment to the environment, his engagement blossomed. By the time of the Energy Fair, he had come out of his shell and became the "top seller." Empowered with information, a cause he can believe in, and deep encouragement, this teen shined.

Indeed, BGCSV staff believe that children are a key component of marketing environmental issues: "If they live the change, and are part of the process of making change, future generations will think conservation has always been a way of life. It will not be something our community will need to think about – everyone will automatically be more aware of conserving in every day behavior."

In a surprising positive development, as a result of the outreach for the Energy Fair, a former BGCSV board member introduced the Club to the CEO of Solar Advisory Group (SAG). SAG became a champion for the Energy Fair and for future projects. Smythe Clubhouse hopes to install solar panels in the near future, which would further showcase the organization's commitment to being a model energy/environmental champion in the community. They also received low-energy lighting donations from Lunera, a partner company of SAG.

For future campaigns, the Club hopes to partner with another organization that would engage its members for special environmental community projects and for ongoing environmental educational programs. In spite of low attendance in this first year, the Clubhouse intends to hold similar fairs in future years, building on the knowledge gained in this first expedition.

Catholic Charities of Santa Clara County

Catholic Charities of Santa Clara County
CORAL Energy Champions

About Catholic Charities of Santa Clara County

Catholic Charities of Santa Clara County (CC-SCC) serves and advocates for families and individuals in need, especially those living in poverty. Their mission is to create a more just and compassionate community in which people of all cultures and beliefs can participate. They accomplish this through job skills training and placement, senior services, mental health and substance abuse counseling, housing assistance, financial education, immigration support, and refugee resettlement. Each year, they serve more than 37,000 people in need.

CECG Focus: CC-SCC added a new energy and environment thematic unit to their Communities Organizing Resources to Advance Learning After-School Program (CORAL), serving grades K-6.

Website: catholiccharitiesscc.org/coral-after-school-program

Campaign Accomplishments

- Incorporated energy efficiency education within a literacy framework through the CORAL After-School Program
- Engaged 1,170 elementary school youth at 10 school sites in the Franklin-McKinley and San José Unified School districts
- Provided additional science and energy related interactive classroom demonstrations
- Surveyed students before and after program participation to evaluate changes in knowledge, behavior, and attitudes

Catholic Charities introduced an environmental education module with a focus on energy to their existing CORAL after-school balanced literacy program. The campaign, CORAL Energy Champions, utilized a literacy-based curriculum as the framework to teach students the importance of conserving energy. The unit used age-appropriate, environmentally-themed books, and interactive materials to teach students about energy and conservation. The students participated in group discussions and completed energy-related activities.

Building on Balanced Literacy: Energy as a Thematic Unit

A literacy framework can be used to teach any theme. Lesson plans included the following components:

- Read Aloud (20 min): Instructors read a book to students in a classroom setting, first teaching key vocabulary that would be encountered in the reading. The instructor asked questions before, during, and after the reading, encouraging students to actively listen and assessing their understanding of the book.
- Shout Out (10 min): Using "Thinking Maps," students wrote on a white board, to connect ideas from the book to their lives, other books, and the world. The exercise helped them present their ideas in an organized fashion, from general brainstorming and description to cause/effect and analogies.

- Journaling (20 min): Students wrote in their journals about a specific prompt related to the book read in class. Before presenting the prompt, the instructor provided a mini-lesson on writing skills.
- Independent Reading (20 min): Students read independently from a set of books at their reading level, while the instructors individually coached them in their reading.

Catholic Charities of Santa Clara County
CORAL Energy Champions

- CORAL Activity Time (15 min): Students participated in hands-on learning activities. These related to the story read in class and ranged from art projects to outside activities.

Lesson plans were created for each day of the week, with the total unit lasting two to four weeks. Students' vocabulary increased, as they were presented at least four new words every day not found in other children's books, such as *fossil fuels*, *renewable energy*, *deforestation*, etc. They were able to identify and correlate literature with energy efficiency and environmental awareness at the end of the unit.

The materials and books rotated through each of the 10 CORAL school sites. Instructors and administrators at each location were exposed to the topics in the process. The support of site managers and instructors exceeded expectations. The books were different in many respects from those traditionally used, from vocabulary to reading approach, and the unit pushed the instructors at each site to test new boundaries. The activities worked well due to instructor preparation as well as the students' natural interest in learning new ideas related to their everyday lives. For example, in "Michael Recycle," the students learned about changes they could make at home to recycle more.

Energy Demonstrations

CORAL Energy Champions augmented lessons with demonstrations, hands-on activities, and discussions about the scientific method and basic energy concepts. Once a week, or at least three times during the period in which CORAL Energy Champions was implemented at each site, the CORAL Energy Champions lead staff member visited the site to deliver 40-minute presentations. These visits gave a face to the program, and motivated students to reflect on their home energy use during the thematic unit.

Energenius, a publicly available teaching resource from PG&E, provides free, fun activities to help convey and reinforce energy concepts. CORAL Energy Champions used Energenius at seven sites. The materials and lesson plans explored the environment, sources of energy, efficiency, and conservation. A windmill scale model that students could touch was a favorite activity.

Other demonstration materials included everyday objects such as kitchen thermometers and lamps. CORAL Energy Champions staff also provided the students with efficiency incentives, including CFLs, night lights, and shower coach timers. These helped keep the students interested in the material and fostered desireable behaviors at home.

Field trips were another important way of bringing the lesson plans to life. Working with Community Access Tickets Service (CATS), an organization that provides cultural, recreational, and educational experiences to tens of thousands of people through partnership with hundreds of social service organizations. Through CATS, the CORAL Energy Champions obtained tickets for students to the California Academy of Science, free of charge.

Quantifying Results

CORAL evaluated students' knowledge and behavior in response to the thematic unit, with the results serving as a guide to evaluate ongoing programs. Students were surveyed before and after their participation in the thematic unit using zoomerang.com. 792 students participated in the "pre" survey and 501 in the "post" survey. The short survey asked students about their behavior and knowledge regarding saving energy and the environment, and was used to assess changes in their knowledge, behavior, and attitudes.

The Survey results showed an increase in students' knowledge of energy resources and energy saving techniques. Specific areas showing increases in knowledge of terms included wind power (17%); solar energy (7%); hydro power (7%); and petroleum (10%).

In terms of attitudes and behavior, the surveys again reported positive changes. When asked if they turned off the lights when they leave a room, 65% answered YES before the thematic unit and 71% answered YES at the end. Students were asked whether they turn the television off when they are not using it, if they shut the refrigerator door, if they turn off the water when not in use, if they take five minute showers, and other similar questions. After the thematic unit, they self-reported a two to six percent increase in every area of energy conservation behavior. They also reported that they cared more about energy saving and efficiency after the unit, with an increase of four percent.

Challenges and Lessons Learned

The CORAL Energy Champion thematic unit was intended to reach 800 students, but ended up reaching 1,169 students. The program was resoundingly successful overall in conveying environmental topics and embedding a new thematic unit. Challenges included:

- helping students adjust to new concepts
- limited instructor training
- limited resources such as books and hands-on materials
- limited funds to take all students on field trips

At the beginning of this initiative, CORAL Energy Champion staff hoped to collect and analyze PG&E bills from students' families to see how much energy they had saved after the unit. Due to infeasibility, the idea was dropped. The program had also initially hoped to have family involvement, including provision of information on home energy habits for students to consider in classroom activities. Resources were not available for the special outreach materials, persistent follow up, and strong incentives that this would have taken. CORAL Energy Champions had one part-time dedicated staff person; his focus on training instructors and administrators at each site and working with the students exhausted all of his time. If the CORAL Energy Champions program is repeated, staff hope to revisit the idea of parental involvement.

For other after-school programs interested in replicating CORAL Energy Champions, staff recommend that instructors receive intensive guidance on how to present the topics covered in the books. Creating exciting activities related to the stories is crucial to student learning.

Students also must be given significant time to digest the new information. Some of the topics had deep science underpinnings. Instructors doing the demonstrations had to convey complex topics, such as alternative energy technologies. While the Energenius materials were helpful and the hands-on learning activities led to improvements in students' learning, the lessons were rich in content. An effective lesson was not possible in a short time.

Catholic Charities hopes to offer this program again, and may expand it into a STEM (Science, Technology, Engineering, and Math) program. STEM focuses on teaching subjects through exploration and engagement, as well as through project based learning. Based on student performance and feedback from both students and instructors, it can be concluded that the program was successful to academic as well as energy conservation purposes. Incorporating the new unit into the existing Balanced Literacy program was easy, as this framework invites new thematic units, and orienting site instructors to the new material took only minimal staff time and preparation. The presence of a dedicated staff person to visit each site and provide hands-on demonstrations for complex topics enabled consistency across sites, ensured that instructors were supported in the technical aspects of the topics they were teaching, and maximized resources.

The program also benefited the community at large, as students became more knowledgeable about saving energy and how to better care for the environment. They demonstrated a clear understanding of how their actions, through simple practices from saving water to planting trees, can make a difference.

From Melissa Molina, a 5th Grade student at Voices Elementary

Community Energy Champion Grantee Case Study

Center for Training and Careers
Community Energize NOW

About Center for Traininng and Careers

Founded in 1977, Center for Training and Careers (CTC) provides employment services to Santa Clara County residents. Each year, CTC trains and places hundreds of productive employees throughout the Bay Area. They offer GED, medical assistant, and green technology training; a Day Workers Program; connection with Second Harvest Food Bank; and other services for at-risk and dislocated workforce members. CTC's Green Career Academy teaches green building, energy efficiency, and Home Energy Rating System (HERS) testing in a state-of-the-art, hands-on training environment.

CEGC Focus: CTC augmented the Green Career Academy with enhanced field training and community outreach.

Website: ctcsj.org

Campaign Accomplishments

- Trained 65 students to conduct comprehensive home energy audits required to achieve HERS II certification
- Educated 424 residents about energy efficiency and related utility services through community workshops, 60 percent of whom signed up for Water Wise audits and 80 percent of whom applied for utility bill assistance programs
- Conducted more than 80 free home energy audits, installed basic measures, and educated homeowners about behavior and technology improvements that reduce energy use

Green Career Academy students learn skills needed for entry into the building, energy efficiency, and renewable energy fields. With the Energize NOW campaign, CTC trained HERS II certification candidates to conduct outreach, community workshops, home energy audits, and basic retrofits. Students conducted more than 80 home assessments and provided community energy efficiency education and outreach to more than 3,000 Santa Clara County residents. Through CTC's existing partnership with PG&E as a California Alternate Rates for Energy program (CARE) and Family Electric Rate Assistance (FERA) contractor, students also assisted eligible homeowners and renters in receiving bill assistance.

Broadening the Mission: From Technical Training to Community Engagement

As part of HERS II certification, students must complete five home energy assessments. Prior to receiving the Community Energy Champions Grant, CTC struggled to find enough households willing to grant students time and access to their homes in order to meet those requirements. With this grant, staff saw an opportunity to broaden both the students' education and benefits to the community. CTC created the Energize NOW campaign to reach residents through a comprehensive engagement strategy that paired community education with home assessments. Green Career Academy students conducted outreach about energy efficiency and water conservation in their communities, delivered a series of educational workshops, and conducted free home energy assessments to willing households. Services were available to both renters and homeowners. Each class of Green Academy candidates had an instructor, case manager, project coordinator, and field trainer. All outreach, workshops, and assessments were led by CTC students and the Energize NOW field trainer.

CTC students enrolled residents for home energy audits through workshops at Home Owner Association meetings, apartment communities, churches, PTAs, booster clubs, and community centers. In the first quarter of the campaign, the students reached 225 people and conducted 14 audits. As of this writing, requests for audits continue to pour in, even though CTC has completed their funding and are unable to continue the service.

In each home, the field trainer supervised students in conducting blower door, infrared, and duct blaster tests, and explained the results to the residents. These tests assess a home's total energy performance, including air leaks, insulation quality, ventilation, and the functioning of key energy systems. Students checked the furnace, furnace filter, and bathroom for leaks. They installed low-cost energy efficiency products including low-flow showerheads, faucet aerators, CFLs, weather-stripping, outlet gaskets, and retractable clotheslines. They explained the importance of electrical "phantom" loads, and addressed occupancy sensors where appropriate.

The students communicated the various steps in the audit, reviewed energy conservation tips, and taught the residents

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how to interpret their utility bills. They assisted any residents who were eligible for the CARE program, both homeowners and renters, with completing and processing their applications. Students shared important energy and water resources with the residents, including PG&E programs, federally funded weatherization services, and local water conservation resources.

Through a new partnership with the Santa Clara Valley Water District, students identified opportunities for homeowners and renters to conserve water. They educated residents about laundry best practices, tested the toilets for efficiency, and made appointments for households to receive Water Wise House Calls.

Working in Multifamily Buildings

The Energize NOW campaign aimed to reach a diverse audience. Since CTC's mission is to deliver workforce preparedness services to primarily disadvantaged populations, they focused a majority of their efforts on low-income homeowners and renters. Like other CECG grantees, they recognized a service gap in home performance assistance for residents of multifamily buildings.

Reaching eligible residents in multifamily buildings who had not already been served by means-tested energy efficiency programs required persistence and follow through. CTC developed relationships with Project Access, a nonprofit organization that runs resource centers for low-income housing residents in most low-income multifamily properties in San José. Project Access works with affordable housing developers and owners in a partial fee-for-service relationship to bring free services to residents. The centers provide referral services, employment readiness and job search assistance, and youth programs including tutoring and pre-school. Conducing outreach in partnership with Project Access gave CTC staff and students instant credibility with residents and led to additional opportunities in other low-income housing facilities where Project Access had a presence.

To provide optimal energy efficiency program coverage, CTC needed to know which residents had not received services from other energy efficiency programs. Project Access staff provided information about their residents' past low-income energy program participation, and referred interested residents to CTC for more information. By the time CTC canvassed or conducted workshops, residents were familiar with the program and more likely to sign up for audits. Hosting workshops at Project Access resource centers allowed the campaign to address many residents at once, build interest in services, and make appointments to assess multiple units in a single day.

Despite significant strides in working with multifamily complexes and Project Access, CTC acknowledges that this new-found expertise may not extend to market-rate multifamily buildings.

Outreach Strategies

At the beginning of the campaign, CTC attempted to garner interest in both workshops and audits/installations through "cold" canvassing. Residents could also sign up for audits at the workshops. New to this scope of outreach, CTC was unprepared for the low interest that stand-alone workshops elicited, regardless of the location in which they were held.

After establishing deeper community partnerships with Project Access and others, CTC began hosting outreach booths at community events in low-income multifamily complexes. The events drew larger and enthusiastic audiences. CTC provided applications for the Federal Low-income Home Energy Assistance Program (LIHEAP), Water Wise House Calls, and CARE at the events, and signed people up for workshops and audits. Following this shift in tactics, both workshop attendance and audits more than doubled, from 15 to 50 percent of those initially contacted.

Building Trust

CTC engaged households for audits through event tabling, door-to-door canvassing, workshops, and student referrals. Most student referrals were friends and family who rented

Center for Training and Careers
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single family homes, many of whom qualified for low-income programs. Approximately 65 percent of all clients serviced were renters.

Building trust and familiarity was crucial at all points of outreach: seeking property manager approvals, participating in community events, and encouraging workshop participation. This was no less true when it came to entering residents' homes. Field trainers and students needed to build trust with homeowners and renters to perform the audits. With referral networks growing from student referrals and Project Access staff endorsements, CTC built increasing demand for their services.

Beyond personal relationships and referral networks, CTC built trust through their knowledge of energy efficiency programs and services. As the campaign progressed, CTC saw a deficiency in complete energy efficiency program information being delivered to residents. They encountered several homeowners who had home retrofits completed by a contractor, but who were never informed about Energy Upgrade California or other rebate programs.

Field trainers and students worked to establish themselves as experts not only in energy efficiency, but also in connecting residents to available resources and rebates. They took time in every visit to address concerns about costs, explaining that their own program and the income-based programs were free. As an existing CARE contractor, CTC had existing referral expertise. Through this campaign, they developed relationships with the Santa Clara Valley Water District, Sacred Heart Community Service (the local LIHEAP provider and a fellow Community Energy Champions grantee), and local Energy Upgrade California contractors. In the first meeting with a resident, CTC would explain how they were referred, the benefits of an audit, and any related external programs that might benefit the renter or homeowner. Every home that CTC treated received a free "test-in" HERS II audit, energy efficiency education, and a Water Wise referral. Following the audit, CTC referred all eligible renters to Sacred Heart for LIHEAP, and many of the remaining renters and most of the homeowners to Energy Upgrade California.

Challenges and Lessons Learned

Despite their technical expertise and referral networks, CTC's program was constrained by limited equipment and language restrictions. Their infrared camera and single set of blower door equipment were shared among 83 students, each trying to complete their five audits. Whenever possible, up to three students participated in each audit: one conducted the walk-through with the homeowner, one completed basic installations, and one set up the blower door test. Additional equipment would allow the student teams to conduct more audits in a shorter time frame.

Language barriers were a major challenge. CTC struggled to identify staff or volunteers who spoke residents' diverse languages. Funds were insufficient to provide translators needed for the audits as well as follow-up phone interviews. In some cases, language barriers prevented them from delivering services. Some non-English speaking clients were naturally wary of inviting strangers into their homes; they first needed to establish a rapport and trust with the auditor in their native language. They were willing to use CTC's assistance to fill in PG&E CARE forms, but were reluctant to allow the audit without full explanations in their native language.

Despite these challenges, in follow-up interviews with renters and homeowners, a majority of those served indicated that CTC representatives were informative and successful in conveying the energy savings opportunities of installed measures. Many residents noted that they planned on following through with recommendations to turn off lights and unplug appliances when not in use, and said that they would definitely refer the program to a family member or friend.

The Energize NOW program addressed more than simple behavioral changes and energy savings. Field trainers and students also sometimes mitigated serious problems in the homes they served. In once such instance, staff found that a family's furnace had a leak causing unhealthy levels of carbon monoxide in the home. Prior to any work being conducted, the family's three year old son had displayed unusual lethargy and sleeping patterns. Once the problem was fixed, the child returned to normal. Left undetected, the problem could have proven fatal.

City of Cupertino
Cupertino GreenBiz

About The City of Cupertino

The City of Cupertino's Environmental Division is responsible for establishing policies and programs to provide disposal and recycling services for residents and businesses. It also represents Cupertino in the Santa Clara Valley Urban Runoff Pollution Prevention Program, a regional program mandated to reduce the toxicity and volume of stormwater runoff in municipal storm drain systems. Additionally, the Division partners with the Office of the City Manager to advance Cupertino's sustainability initiatives, such as energy efficiency, renewable energy, water conservation, alternative transportation, green jobs, urban gardening, and local food.

CECG Focus: The Environmental Division localized the statewide green business program for Cupertino's small businesses by coordinating multiple partners and complex services.

Website: cupertino.org

Campaign Accomplishments

- Engaged 95 businesses in the GreenBiz program through energy and water audits and resource education
- Certified 16 businesses as Green Businesses
- Provided staff and trained volunteers to assist businesses with navigating the certification process, obtaining energy and water efficiency retrofits, and marketing their achievements
- Developed the Cupertino GreenBiz program into a known brand associated with small- and medium-sized businesses and restaurants that are reducing their environmental impact, providing healthier products and services, and increasing economic development
- Created a scalable service model that includes engaged partners for various steps in the certification process

The City of Cupertino launched GreenBiz to localize the statewide Green Business Program (www.greenbiz.ca) as a service tailored to the needs of their small business community. To the City, a certified Green Business itself, the problem statement was clear: the process of becoming a green business is onerous, and prospective candidates lack the time and knowledge to complete the lengthy online application, let alone implement measures required for certification. The City learned through interviews that many prospective applicants opened the online checklist once and never returned to complete it.

Given these identified barriers, and seeing the potential environmental benefits for businesses and the city as a whole, Cupertino developed GreenBiz with a simple goal: to increase the number local participants by shepherding businesses through the rigorous process. The GreenBiz team acted as pro bono consultants, providing free guidance throughout the certification process and connecting businesses with relevant resources, free equipment, and rebates. Staff and interns dedicated up to 40 hours of assistance per business to clarify and streamline the steps required to complete the program criteria, and to engage business owners, managers, and employees on new purchasing practices, facility upgrades, and alternative employee practices. The City celebrated and showcased businesses that attained certification, highlighting their achievements through a variety of civic media for their

City of Cupertino
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contribution to the environmental health of Cupertino, Santa Clara County, and California.

The City now has 36 certified green businesses, 16 of which were supported through GreenBiz. An additional 13 are nearing certification. This growth in participation is especially impressive considering that from 1996 to 2011, Cupertino was home to just 12 certified businesses under the statewide program—seven of which were City-owned facilities. During the grant period, 95 Cupertino businesses actively participated in the GreenBiz. The City estimates that those certified will realize $17,316 in combined annual savings from water and energy efficiency measures—an average of more than $1,000 in annual financial savings per participating business.

Building a Trusted and Effective Local Resource

City staff and volunteer interns worked with an array of businesses, including retailers, schools, restaurants, grocery stores, property managers, auto mechanics, and cinemas. The GreenBiz team helped businesses accelerate waste reduction, prevent pollution, and foster behavior changes that lead to operational efficiencies and cost savings. Staff worked with participating businesses to complete the sector-relevant checklist, site assessments, and recommended upgrades. GreenBiz staff scheduled and attended all site visits with local utilities and service providers, including PG&E, San José Water, and the Santa Clara Valley Water District, as well as the final inspection, conducted by Santa Clara County, the program "parent."

The GreenBiz team consisted of one full-time Sustainability Division staff member, a 10-month Climate Corps Bay Area (AmeriCorps) member, and seasonal volunteer associates. The high-touch model created awareness in the business community about the benefits and services of the GreenBiz program. GreenBiz staff reached out to approximately 500 local businesses, including 169 located in multi-tenant commercial complexes, and 65 that attended the Mayor's Small Business Workshop. This led to 89 expressing interest in program, all of whom hosted introductory meetings with the GreenBiz team to learn more about the program's suite of services. Reflecting the universal challenges of green business certification, these businesses included chains that were unable to proceed without headquarter approval, those with owners or managers living outside of the city, and small "mom and pop" shops that had to reschedule site visits due to staffing constraints.

The GreenBiz Program worked with property managers to benchmark facilities, thereby facilitating compliance with the Commercial Building Energy Use Disclosure Program (AB1103). GreenBiz staff led indoor and outdoor water audits and retrofits, which they projected would result in annual savings of more than 1.5 million gallons of water. By collaborating with a PG&E-authorized direct installer, GreenBiz facilitated lighting, refrigeration, and HVAC audits, followed by large-scale energy retrofits for three local businesses. The energy retrofits collectively have an expected annual savings of 73,797 kWh and four tons of CO^2 emissions.

Nearly all participating businesses inquired about upgrading their systems to more efficient equipment, including chillers, walk-in refrigerator motors, lighting upgrades, A/C units, and solar installations. The ability of GreenBiz staff to provide these businesses with specific retrofit or replacement information further validated the program's merit. GreenBiz staff also provided informational resources at in-person meetings and via the website, newsletters, and "best practices" fact sheets.

City of Cupertino
Cupertino GreenBiz

GreenBiz outreach stretched beyond traditional media, as program representatives formed direct relationships with the businesses they served. Staff had reached out to local favorite Evolution Bike Shop on numerous occasions. The business had previously helped the City establish its first bike fleet, completed a lighting retrofit, and generally employed environmentally conscious practices. Yet, like many, they were unconvinced of the benefits of official certification. In April 2012, Evolution participated in Cupertino's Earth Day event with a mini-bike shop, free tune-ups, and safety lessons. Two days later, shop staff asked how they could become more involved in City programs, giving GreenBiz representatives an opportunity to address the benefits of certification, such as public recognition and partnership opportunities. A formal site visit was conducted four days later. The store now proudly features their Green Business certification on their website and storefront window.

Working with Partners

Cupertino is home to more than 2,000 diverse businesses. To meet broad demand and provide effective support for all business types, GreenBiz partnered with a variety of local area experts. This enabled a robust suite of services that accelerated implementation of measures. Partners included the Cupertino Chamber of Commerce (marketing & outreach); Santa Clara Valley Water District (water conservation services); PG&E's Third Party provider RightLights (energy audits, lighting and refrigeration retrofits); Recology (waste, recycling, and composting solutions); De Anza Community College and UC Berkeley (intern support); and the Santa Clara County Green Business Program (certification and recognition).

The network enabled GreenBiz to offer comprehensive sustainability services, and achieve continuity in utility and financial savings long after the final site assessment was completed. While Cupertino is the only public agency in Santa Clara County to offer these hands-on services for businesses, staff believes that the tools and training models they have developed constitute a replicable model for other cities to adopt with ease.

Increased Savings and Marketing Opportunities

California cities are still feeling the impacts of recession, particularly including the loss of redevelopment funding. Economic instability has necessitated that public agencies be creative with limited funding while maintaining essential services for their residential and business taxpayers. By working directly with businesses to facilitate utility savings and then broadcasting their achievements throughout the community, GreenBiz has effectively bridged an important service gap experienced among financially-strapped communities.

In addition to lowering the operating costs for businesses, Cupertino GreenBiz provided businesses and property owners with the opportunity to distinguish themselves from competitors, both within and beyond the city. Cupertino residents have high service and environmental standards and seek out businesses that mirror these values. GreenBiz is now a brand that resonates with local consumers, strengthened by support of the City's statewide affiliate, the Bay Area Green Business Program. GreenBiz property owners market their spaces as green buildings, which is associated with higher tenant retention. According to McGraw-Hill Construction and the US Green Building Council, green buildings can reduce operating costs by eight to nine percent, increase value by seven and a half percent and increase the occupancy ratio by three and a half percent. In Cupertino, "green" now signifies efficient equipment, reduced costs, a healthy work environment, and matching customer to tenant values. All certified green businesses are displayed on the State and county websites, highlighted in Cupertino's civic media portfolio, and recognized at county and city events. In a city where council meetings average 10,000 unique online viewers, businesses seeking product differentiation receive enormous benefits from this increased visibility.

Greening Beyond Energy

In 2011, Cupertino negotiated a franchise agreement with local waste hauler Recology to introduce citywide single-stream recycling and composting for residents and businesses, in an attempt to engage the community in reducing the amount of waste going to landfills. Thus, one of the initial goals of GreenBiz was to ensure that all businesses were, at a minimum, taking advantage of Recology's new services.

Staff discovered that few businesses knew of these offerings and even fewer were taking advantage of them. In the first six months, GreenBiz and Recology staff provided 25 businesses with receptacles for complete indoor and outdoor disposal, recycling, and composting, along with multilingual signage and training for all employees.

City of Cupertino
Cupertino GreenBiz

Cupertino went a step further by initiating the Environmental Protection Agency's (EPA) pilot Food Recovery Challenge, to assist Cupertino's 11 grocers and markets in accessing available inventory management programs, strengthening or establishing donation agency partnerships, and implementing composting services.

Cupertino's program further differentiated itself from other green business initiatives by including health and wellness measures, designed in collaboration with the Santa Clara County Public Health Department (PHD). Where applicable, these emphasized alternative commuting, alternative fleets, means-tested food and nutrition benefits, healthy food and beverage options, menu caloric information, and local, organically grown foods. By encouraging these measures, the City acted as a liaison between business owners and the PHD, empowering businesses to create healthier work and retail environments for employees and patrons alike.

Challenges and Lessons Learned

Any effort to convene multiple partners in order to simplify complex services brings inevitable challenges. For example, RightLights, the energy efficiency provider, is funded by PG&E through public utility ratepayer funds. Some months before the end of this campaign, RightLights reached the end of their funding and therefore stopped taking new referrals. This meant a gap in services until the following program cycle, which was months away. RightLights could no longer share data on potential or actual savings, which hamstrung the City's ability to make the case for lighting improvements. Lighting is often the biggest barrier that businesses face to certification, as the program requires replacement of all T12s and incandescent lamps with more efficient alternatives. This roadblock will not be resolved until utility energy efficiency program funds are replenished in 2013.

Another challenge emerged when a GreenBiz participant was eliminated from the certification process at the final stage due to County-level storm water and health code violations. Staff had spent more than 30 hours working with the business owner through numerous compliance steps. Staff had assumed that enrollment in GreenBiz automatically triggered the County's regulatory review, and was unprepared for this development. In actuality, the compliance check was the last step for the County team.

Following this incident, City and County staff worked together to devise a solution that set a new precedent for GreenBiz. Both agencies committed to check for violations as soon as a business enrolls in the program. This will prevent another disappointing situation for a GreenBiz participant, and further expedite the overall certification process.

With their various partners, Cupertino hopes to continue GreenBiz, and continues searching for additional means to scale and grow the program. They believe it to be a replicable model for other agencies that have small teams, strong networks, and a willingness to support business that contribute to environmental and economic resiliency.

City of Cupertino
Growing Greener Blocks

About The City of Cupertino

The City of Cupertino's Environmental Division establishes policies and programs to provide disposal and recycling services for residents and businesses. It also represents Cupertino in the Santa Clara County Urban Runoff Pollution Prevention Program, a regional program mandated to reduce the toxicity and volume of stormwater runoff in municipal storm drain systems. The Division partners with the Office of the City Manager to advance Cupertino's sustainability initiatives, such as energy efficiency, renewable energy, water conservation, alternative transportation, green jobs, urban gardening, and local food.

CECG Focus: The City launched the Growing Greener Blocks campaign to educate residents about the City's environmental programs, with a strong focus on energy efficiency and immediate energy reductions.

Website: cupertino.org

Campaign Accomplishments

- Engaged neighborhoods in the suite of city services to support energy efficiency, materials management, water conservation, and financial savings
- Trained volunteer community leaders through Cupertino's award-winning Block Leader program
- Reached 350 residents through neighborhood workshops
- Conducted five "Day of Savings" neighborhood energy efficiency Sweeps
- Conducted 40 HouseCalls to increase residential energy efficiency and environmental program uptake, including seven for Block Leaders
- Launched the Green@Home Do-it-Yourself Kit, now available for free check-out at the Cupertino Library

Cupertino's Environmental Affairs Division launched Growing Greener Blocks to foster environmental education, broaden citizen participation in city programs, and increase resource stewardship across the community. Cupertino leveraged its award-winning 350-members-strong Neighborhood Block Leader Program to activate neighborhoods and apartment complexes in the city's full spectrum of environmental services. These volunteers have long served their neighborhoods and the city as "boots on the ground" leaders, working to build a stronger, more resilient community through events focused on crime prevention and emergency preparedness. Growing Greener Blocks boosted the Block Leader community engagement toolkit with additional resources meant to further safeguard the health, and ensure the longevity, of the community.

At the core of the initiative were Green@Home HouseCalls—energy and water conservation assessments derived from fellow CECG recipient Acterra, first conducted in Block Leaders' homes. Block Leaders championed the HouseCalls at subsequent block parties, which were followed by Neighborhood Energy Sweeps where multiple HouseCalls were conducted on a single "Day of Savings." More than 40 HouseCalls were conducted through the campaign.

Growing Greener Blocks enabled city staff to connect directly with residents outside of City Hall. Staff was able learn and act upon citizen concerns, gauge community interest on forthcoming City projects, and establish deeper two-way communication channels with the community. Direct feedback from residents during the campaign prompted staff to create the *Green@Home Do-It-Yourself Toolkit*, now available at the Cupertino Library, for residents to implement resource conservation measures on their own time. The Kit launched September 4, 2012, to a full wait list. For more information, see www.cupertino.org/blockleader.

A Strong Outreach Network

The City of Cupertino's Block Leader Program, recipient of the 2010 League of California Cities' Helen Putnam Award for Enhancing Public Trust, Ethics, and Community Involvement, has forged strong relationships among city staff, community leaders, and residents. Block Leaders typically organize 20 to 30 homes. Some leaders are in touch with as few as five households (such as in a cul-de-sac), while others coordinate up to 90 homes or apartments.

This campaign rested on a diffusion-of-outreach strategy: Rather than trying to reach the resident community at large, city staff conducted outreach to Block Leaders only. By partnering with Block Leaders, Neighborhood Watch Leaders, and the Community Emergency Response Team (CERT), city staff easily broadcasted new programs to an

City of Cupertino
Growing Greener Blocks

extensive base. The city saw in the Block Leader network an opportunity to get the word out to an already active audience about environmental initiatives and services, to build trust and excitement among residents for those services, and to provide energy efficiency education and retrofits.

A Framework to Increase Neighborhood Participation

City staff offered the Block Leaders unique tools to spark neighborhood participation in the Greener Blocks campaign. The initiative included a Green@Home HouseCall, a community presentation, and a weekend Neighborhood Sweep. City staff presented information about Green@Home, and Block Leaders, having received HouseCalls, offered testimonials of their experience. Households learned about and participated in the program through the referral of their Block Leader. At block parties and presentations, residents were able to sign-up for an upcoming neighborhood "Day of Savings" Sweep. During the HouseCalls, trained Acterra volunteers and city staff performed energy and water assessments and installed basic energy and water efficiency equipment.

Many households signed up for the Neighborhood Sweep at the block parties, and even more signed up after the event. The Sweep created an air of friendly neighbor-to-neighbor competition and excitement, and the neighborhood with the highest participation received a block of tickets to a future San Francisco Giants baseball game. All confirmed program participants were entered into a raffle to receive a free "smart power strip" that would be delivered and installed the day of their HouseCall.

Engaging Neighborhoods

City staff used many outreach methods to gain participation in the initiative, from articles in neighborhood newsletters to presentations at the Block Leader trainings. They used mapping software to identify neighborhoods with existing Green@Home participation density to better target additional outreach. Other efforts included:

- A Do-It-Yourself Block Leaders training
- Invitations to the Growing Greener Blocks "Community Conservers" program
- Phoning Block Leaders to introduce the program's framework and invite participation
- Presentations at Home Owner's Association (HOA) meetings
- Program promotion at the Cupertino Earth Day Festival (which drew more than 8,000 guests
- Marketing Greener Blocks via two Energy Upgrade California Workshops – one in English (75 attendees) and one in Mandarin (225 attendees).

The city has now performed seven Block Leader HouseCalls. Staff reached 350 residents through subsequent neighborhood presentations and conducted five Energy Sweeps. The simple actions taken during these free HouseCalls produce real savings: Cupertino city staff estimate that participating homes saved an average of 308 kWh of electricity, 43 therms of natural gas, and 8,565 gallons of water per year. This translates into an annual savings of up to $175 per household on utility bills. In September alone, 21 homes in these five neighborhoods organized a Community Energy Sweep, a single-day energy saving event where a neighborhood hosts HouseCalls for its residents. As a direct result of the Sweeps, staff reported that neighbors are cutting an average of $173 off their annual utility bills, and saving nearly $5,000 annually across all participating neighborhoods.

City of Cupertino
Growing Greener Blocks

Fostering Resident-City Communication

Participating in block parties has fostered a deeper understanding of, and interest in, the city's environmental programs, while allowing staff from the City Manager's Office to gather direct feedback on community priorities and concerns. As a result of the block party engagements, Cupertino's team was able to respond to immediate concerns regarding an unsafe sidewalk, which was fixed the first work day after the block party, and a dangerous tree stump, also removed the first work day after the block party. By receiving this information first-hand, rather than through the city's online feedback system, staff was able to take immediate action. This underscores the value of creating a direct connection to neighborhoods by having staff support the Block Leaders at events.

Library "Do-it-Yourself" DIY Kits

After initial excitement when Green@Home was first introduced in Cupertino in 2009, HouseCall requests had slowed dramatically. City staff learned that many residents who were adept at home repairs were hesitant to invite strangers into their home to spend two hours installing equipment. Further, residents informally surveyed at community events and public meetings expressed concern that the program would offer few additional benefits, given that they had already updated their lighting and water fixtures or installed solar.

Knowing that more opportunities could be found through a HouseCall, yet eager to address the concerns of this community, the City developed a Green@Home Do-It-Yourself (DIY) Toolkit in partnership with the Cupertino Library (a member of the Santa Clara County Library District), Cupertino Library Commission, and the City's Technology Information and Communications Commission.

The Toolkit makes cutting energy and water costs at home as easy as checking out a book. Library patrons check out a Toolkit for one week and use the tools included to install the suite of free utility conserving devices that are provided. Patrons keep all the devices, but return the tools. Staff report that users can expect to save, on average, $200 per year after installing the equipment, which includes CFL light bulbs, faucet aerators, a low-flow shower head, weatherstripping, and more. The ToolKit also includes an easy "how-to" user guide, complete with links to interactive videos, to help residents navigate points of action in their homes. Importantly, it also includes tips on decoding utility bills and calculating savings. This model offers a non-intrusive way for residents to assess their energy use, and to feel empowered in making their own changes and seeing the results.

Before the public launch, the City solicited feedback from City Commissioners, Acterra, the Silicon Valley Energy Watch, and the Santa Clara Valley Water District. The kits went live in September 2012 following an article in the Cupertino Scene, the local City-produced newsletter, and Library web-posting. All five were immediately checked out, with fifteen residents awaiting their return through a waiting list. Additional kits are proposed to be added to meet the demand.

City of Cupertino
Growing Greener Blocks

Investing in Intern Training

While the Growing Greener Blocks Specialist position has been filled by a Climate Corps Bay Area Member, the City also recruited three undergraduate Summer Associates to support program activities. Interns are tasked with supporting both the Growing Greener Blocks and the Cupertino GreenBiz program (also funded by the Community Energy Champions Grant). In addition to attending a summer Acterra Green@Home training, these "Summer Associates" underwent an intense, two-day training on how the City of Cupertino works, the environmental programs and services offered, and processes and outreach strategies employed. This training, developed specifically for these programs, proved highly effective in saving the Sustainability Division staff time by enabling the interns to immediately begin program implementation. This training framework has now been institutionalized and will be used to bring future student interns on board.

Collaborative Efforts

The City leveraged its partnership with Acterra and The Kirsch Center for Environmental Studies at De Anza College, both CECG recipients. Acterra provided outreach support, retrofit activities, and training services for Block Leaders as well as for households during the Neighborhood Energy Sweeps. The Kirsch Center was a core partner in providing trained and enthusiastic interns who understood the Cupertino community and conducted effective outreach for Growing Greener Blocks. These "Summer Associates" underwent a two-day training on how the City of Cupertino works, its environmental programs, and key outreach strategies. This training, developed specifically for the city's two CECG campaigns, proved effective in enabling the interns to immediately begin program implementation. The training framework has now been institutionalized and will be used to bring future interns on board.

The campaign also provided support services to low- and moderate- income families via a partnership with CECG recipient Rebuilding Together Silicon Valley.

Challenges and Lessons Learned in Multifamily Outreach

The most challenging aspect of the campaign was engaging residents of multifamily buildings. These residents do not pay for water expenses, a large focus of Green@Home; in many cases, they lack access to their hot water heater, where adjustments are made during the HouseCall. Out of 80 units canvassed in one complex, only two residents participated the Community Energy Sweep (renamed to fit multifamily complexes rather than neighborhoods).

Conducting "outreach by proxy," the underlying approach of this campaign, was challenged in these situations. Campaign messaging had to be tailored more carefully than ever to address homeowners' concerns. The city offered a smart strip for the first five residents to enroll, and attempted to highlight the financial benefits of participation. For one HOA that paid the water and natural gas expenses, staff stressed the benefits of water conservation and hot water heater adjustments, and offered to build connections with PG&E and the Santa Clara Valley Water District to evaluate energy and water usage in common areas. City staff worked with Block Leaders who were members of the buildings' HOAs, and others who were not. In all cases, residents remained skeptical, and even the Block Leaders were less responsive than those in traditional, single-family neighborhoods.

The most valuable lesson for outreach was to carefully schedule neighborhood events around holidays, school breaks, and other key dates. Staff also learned the importance of maintaining close communication with Block Leaders who are entrusted with reaching their HOA. As the first attempt at working with a multifamily complex showed, an undependable Block Leader can derail the campaign by not posting or distributing information about the program before a workshop. City staff learned to support Block Leaders by providing them with both materials and a schedule to distribute those materials. Block Leaders working with the HOA can further assist the campaign by allowing city staff, where appropriate, to correspond directly with tenants via email, door-to-door flyer distribution, or at meetings, thus saving the individual time and enabling direct access to experts.

CreaTV San José
Cortese Climate Kids Club

About CreaTV

CreaTV manages a nonprofit media center serving Santa Clara County. They program four non-commercial community channels for San José and Campbell, and support programming for a variety of audiences, including "telecourses" and activities from local colleges. They run a digital media training center for their members, provide equipment and facilities for the creation of content for the local channels, and provide production crews for local non-commercial video projects. Through the Media Access Project (MAP), CreaTV provides HD cameras, headphones, lights, microphones, editing suites, and more to local elementary, middle, and high schools.

CECG Focus: CreaTV is producing a new environmental children's program to be aired publicly, online, and as part of related school curricula.

Website: ctcsj.org

Campaign Accomplishments

- Producing and broadcasting a six-episode children's television series based on concepts from County Supervisor Dave Cortese's Climate Kids Club.
- Piloting one episode in front of a live classroom to assess viewer interest and age-appropriateness of content
- Offering a Cortese Climate Kids membership card and booklet based on the show, including activities for children and their families
- Partnering with local agencies to film show characters visiting green buildings, interviewing environmental experts, and observing city services such as waste management

Collaborating with the office of Santa Clara County Supervisor Dave Cortese, CreaTV built on the Cortese Climate Kids program, in which Supervisor Cortese visits and discusses environmental topics with students in classrooms. His goal is to motivate kids to learn environmental stewardship through conservation, reducing waste, reusing resources, and educating friends and peers. CreaTV is producing, airing, and evaluating a series of six television shows for the second- through fourth-grade child audience that builds on those topics. The series aims to educate the child audience about environmental concepts, and present activities and modeled behavior that kids can do to help conserve the environment.

The project was delayed due to the tragic loss of a key staff person, and is therefore still in production at the time of this writing.

Creating an Environmental Television Series for Kids

CreaTV is using their expertise in community producing and broadcasting to increase awareness and adoption of green practices among children and their families. They have assembled a team of interns, volunteers, local child actors, and a producer to create the series. The show presents activities that children can do at home without the use of additional equipment, such as closing the refrigerator door while deciding on a snack, taking shorter showers, watering the yard in the morning or early twilight to minimize evaporation, putting recycled materials in the correct bins, and drawing on both sides of a piece of paper. The children are encouraged to do other simple activities with their parents or other adults, such as changing traditional light bulbs to CFLs, adjusting the household thermostat, or carpooling. The half-hour episodes address the following topics:

- Pilot: Global Climate Change
- 1: Garbage and Recycling (featuring a field trip to Monterey Garbage)
- 2: Energy (featuring a tour of the Adobe world headquarters, internationally recognized for its green building features, and San José's San Pedro Square)
- 3: Water (featuring a creek clean-up)
- 4: Nutrition
- 5: Series overview

Each episode begins with a presentation of the topic. Children then investigate the topic with studio guests, pre-taped magazine-style segments, websites, books, and activities. Supervisor Cortese then describes the county policy or how the problem is being handled in Santa Clara County. Finally, the episode is recapped and activities are reviewed.

CreaTV San José
Cortese Climate Kids Club

Supervisor Cortese's segments are two to four minutes each, pre-taped in the council chambers or his office. His scripts are written in collaboration with his staff and subject matter experts. All show scripts are reviewed by advisors at the San José State University department of Environmental Science and Meteorology, as well as by designated subject matter experts, many of whom were referred through the Silicon Valley Energy Watch.

The set for the show resembles a kid-friendly garage hangout. Anything made during the show, such as a simple solar oven, is then displayed on set shelving. The five child actors range in age from eight to twelve, and match the racial diversity of the Bay Area. All actors were required to read at grade level and be able to follow the teleprompter and scripts.

CreaTV staff use all available resources, emphasizing that producing a similar show commercially would cost $100,000 per episode. The sets contain numerous donated items and materials. Due to limited space at the CreaTV studios, they are stored in the hallways between tapings. The inclusion of field trips, diverse segments from external sources, and interviews give the show an exciting and professional look and feel, while remaining accessible to the target audience.

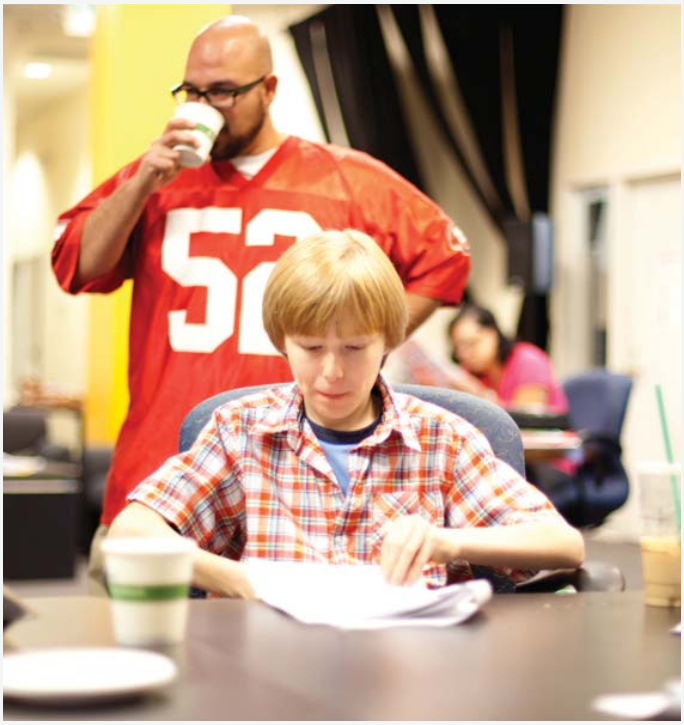
Broadcasting and Community Engagement

CreaTV is an active community partner; this show took that value to the next level. Never had more than 20 children auditioned for any role. For Cortese Climate Kids, 83 children and their parents came to auditions. Most of the children had seen the ad on their school website or were forwarded the announcement by friends or relatives. Advertisements had also been placed on two school websites, specifying "no experience necessary." A middle school that partners with CreaTV through MAP also marketed the auditions.

As a public access station, CreaTV is also committed to delivering educational content to as broad an audience as possible. Cortese Climate Kids will be aired on Comcast Channel 28, The Classrooms Channel; streamed live on the Internet; and made available through CreaTV San José's website for on-demand viewing.

CreaTV is providing several additional outlets to educate the Santa Clara County child audience about the show. This includes a booklet for kids and families based on the episodes' content; a web page dedicated to the show; and featured science videos submitted from various Santa Clara County schools. In conjunction with Supervisor Cortese's office, CreaTV is piloting the series in front of live student audiences at classrooms around the County, beginning with a screening for fourth and fifth graders at San José's Willow Glen Elementary School. They will also promote the program throughout the 17 MAP schools.

The webpage will provide an avenue for kids to engage on the topics presented in the episodes. It will include links to videos, instructions on how to join the Cortese Climate Kids Club, and resource links for further information about the show's topics. It will be a place where kids and their families can get engaged and solicit feedback. When the show airs, CreaTV will send out surveys to all members of Cortese Climate Kids Club, as well as post the surveys in his newsletter, to garner feedback about the show.



CreaTV San José
Cortese Climate Kids Club

The Benefits of Collaboration

CreaTV's ability to produce professional-quality programming at a fraction of the budget of regular networks is in part thanks to their numerous community partnerships. The station seeks collaborations with organizations that have valuable information to offer but cannot gain airtime from mainstream media. The Cortese Climate Kids show is a testament to these partnerships, as the characters visit sites, interview experts, and engage in activities that illustrate the key topics. The Adobe world headquarters in downtown San José, the site of the second field trip, is the first triple-LEED Platinum corporate campus in the world. The tour featured in the episode highlights the energy efficiency and green building features, and includes an interview of the Facilities Manager. Similarly, San José State University's Green Ninja Project, another CECG recipient, provided footage to use throughout the series. The Santa Clara County Water District also provided age-appropriate Public Service Announcements on water conservation.

In what CreaTV regards as another collaborative process, the involvement of interns on the show gives young people experience in script writing, production, and broadcasting, as well as education in the show's content. While mentoring the interns takes time, the cost effectiveness and social benefits are worth the effort.

Challenges and Lessons Learned

CreaTV found it challenging to schedule child actors' time given their school commitments, and had to recast one actor. During production, CreaTV also suffered the loss of their Associate Producer. The tenacity and dedication of staff and volunteers, and their willingness to take on additional responsibilities, have kept the project moving forward, albeit delayed.

At this stage in the project, it is too early to tell what impact the show will have on the lives and habits of its viewers. While it is difficult to ascertain the impact on viewer behavior of any educational television show, CreaTV is implementing multiple methods to solicit feedback and ongoing involvement from its various audiences.

In the interim, the child actors, staff, and interns have all reported changing their own behaviors to incorporate what they've researched, written about, and recited regarding environmental degradation and conservation. After implementing changes in her life inspired by the show, one producer's PG&E bill dropped from $118 to $15 per month.

Community Energy Champion Grantee Case Study

De Anza Community College
Energy Management Technician Lab Teams

About De Anza College and the Kirsch Center for Environmental Studies

The Kirsh Center for Environmental Studies at De Anza College provides students with an environmental stewardship foundation; knowledge of ecological, social and economic concepts; and an awareness of their roles within a sustainable society. The program integrates ecological, ethical, socioeconomic, and political principles, employing formal and non-formal methods as effective means of education.

CECG Focus: Building on its established Energy Management and Climate Policy Program, the Kirsch Center created a new, hands-on energy management technician lab.

Website: deanza.edu/kirschcenter

Campaign Accomplishments

- Built and equipped a permanent lab to train students in energy efficiency monitoring, data collection, and analysis for commercial buildings
- Used the De Anza College campus as a real-time lab for practical experience
- Assisted students in obtaining internships with local municipalities and other organizations
- Prepared students for successful energy management careers in both the public and private sectors
- Positioned The Kirsch Center as a leader in energy management training

While successful in conveying technical knowledge, the widely respected Energy Management and Climate Policy program lacked a lab for students to develop the practical skills needed to succeed in the field. The Kirsch Center addressed this gap by creating the Energy Management Technician Lab. This intensive, one-unit course, offered in two sessions, lasted either six or 12 weeks. The lab was designed to develop student proficiency in comprehensive energy auditing and monitoring, data analysis, and reporting for commercial buildings.

Students received state-of-the-art tablets loaded with energy management and monitoring software and tools. They had access to De Anza College Campus facilities, thus gaining immediate experience with commercial building equipment. The Kirsch Center also provided hands-on internships for participating students. The diverse group joining the energy management technician lab teams in the first year included new and returning students, vocational students, and workforce returnees seeking to update their skills, all looking for clean energy and green career opportunities.

A State-of-the-Art Lab and Curriculum

The Kirsch Center has a strong part-time faculty with industry experience. In the summer and fall of 2011, instructors designed the Energy Management Technician Lab curriculum and acquired the necessary equipment and software. The curriculum emphasizes teamwork, where students share a station and assist each other in data monitoring, collection, analysis, and reporting. Students use state-of-the-art equipment in the lab courses as a complement to the existing Energy Management lecture series.

By developing relationships with campus facility managers, instructors obtained keys to all main control and equipment rooms at De Anza. This gave them the flexibility to survey the equipment and systems before each lesson and better prepare for instruction. Once the instructors visited, surveyed, and set up monitors in the campus facility, students were taken to observe the many moving parts of energy management including the motor control center, chillers, chiller control systems, condensers, boilers, hot water motors, motor loggers, variable frequency drives, BTU and power meters, and lighting systems.

De Anza Community College
Energy Management Technician Lab Teams

Students had access to numerous tools to measure and analyze commercial energy use, including HOBO data loggers, Kill-A-Watt® meters, portable lighting demonstration units, HVAC simulation software, building management systems demonstration software, full-spectrum infrared monitors and cameras, and air quality monitors. Tablet computers were a great advantage because of their portability and advanced software configuration. The Kirsch Center also purchased vests and flashlights for the students to use when visiting the tight quarters of the mechanical rooms.

By using the Kirsch Center and the De Anza Campus as lab settings, the curriculum focused on real world application. The lab and curriculum are now part of the Energy Management and Climate Policy Certificate program and will be offered regularly. This educational approach spread to other nearby community colleges including Ohlone, Cabrillo, and Los Rios, as well as colleges in the Sacramento and Marin areas.

Partnering with Nonprofit, Commercial and Municipal Sectors

Well-trained technicians are vital to the energy interests of the commercial, municipal, and nonprofit sectors. The Energy Management Technician Lab is an environment for its students to thrive in a growing industry. The Kirsch Center collaborated with the cities of Cupertino and Sunnyvale, Joint Venture Silicon Valley, and other partners, to give students the opportunity to apply their skills with real clients and gain valuable professional skills.

Enthusiastic students found internships with the cities of Sunnyvale and Cupertino, where they conducted energy assessments for various projects, addressing both municipal buildings and community initiatives. One such internship was with the City of Cupertino's GreenBiz program, a fellow CECG recipient. Students worked with Cupertino businesses to usher them through the energy upgrade and green business certification processes. Additionally, these students learned necessary skills for the public agency environment, including communication with staff and elected officials and policy interpretation. Providing qualified students to work on civic projects had a positive impact on the businesses and stakeholders involved, for whom the students' presence conveyed both the importance of the work and the excitement of achieving milestones along the way.

Another group of students enrolled in the lab put their skills to work with the Greenhouse Gas Inventory Project, led by Joint Venture Silicon Valley in partnership with other local municipalities. The project required negotiating complex data sets from multiple sources and working with a diverse team. These students received a small stipend and invaluable experience that will be carried into any future place of employment.

To encourage entrepreneurship and help students network with industry leaders, the Kirsch Center entered three student groups in the 2012 Clean Tech Open. The students who submitted entries and negotiated a long selection process were either working toward or had received their Energy Management and Climate Policy Certificate. They developed innovative ideas, built them into prototypes, and presented to industry leaders and potential venture funders. The students were inspired by the competition and broadened their professional networks.

Several students from the Energy Management Technician Lab have also volunteered their time with Acterra's Green@ Home program (another CECG recipient), where they conducted in-home energy assessments, installed energy efficient devices, and provided resident education. While not directly related to commercial energy management systems, this experience provided students with important skills in diverse public communication and teamwork, and helped them further build their experience in the energy management and efficiency field.

De Anza Community College
Energy Management Technician Lab Teams

Challenges and Lessons Learned

The Kirsch Center faces three main challenges that affect the Energy Management Technician Lab and other course offerings. The first is rising enrollment fees. Staff felt that recent fee hikes contributed to low enrollment in fall 2012 lecture and lab classes. This led the Kirsch Center to suspend all on-site Energy Management classes for the fall 2012 quarter. Instead, they offered Distance Learning Energy Management classes. The campus classes will be reinstated in winter and spring 2013.

The second major challenge is identifying funds for a full-time faculty member dedicated to the Energy Management Program and Lab. The Kirsch Center relied on a part-time faculty pool, two of whom recently cut back their teaching hours. Part-time faculty is often affected by external work demands that minimize their availability. The Kirsch Center is actively searching for new faculty.

Finally, staff felt that outreach for the Energy Management Program and Lab classes was inadequate. Educational budget cuts means limited resources to conduct outreach for new and specialized programs. The Kirsch Center advertised an open house for the lab in the De Anza College newspaper, "La Voz," and was disappointed when no one showed up. More robust advertising was needed.

In a new outreach strategy, staff plan to offer Stewardship Meetings in the Kirsch Center so that students and others interested in environmental issues can meet one another. They will also be able to meet the faculty and explore class offerings. The hope is to create more awareness in all Kirsch Center programs and courses. The Kirsch Center also added a Facebook page for the Environmental Services Department to attract awareness through social networking.

Staff are exploring additional outreach methods to reach both high school and De Anza College general education students to increase enrollment in 2013. They are working with PG&E's Stockton Energy Training Center to host their trainings at the Kirsch Center. Staff are also working with campus personnel to complete the Outdoor Solar Lab classroom.

Kirsch Center staff hope to further improve the program through stronger alliances with the private sector, generating mentors, informational activities to foster job readiness, and internship opportunities. They also hope to build relationships with other municipalities beyond Cupertino and Sunnyvale. They are also attempting to better track students after graduation to determine how the market is reacting to a skilled energy efficiency workforce; which companies and agencies are hiring; and how students are placed. Several alumni return to the Environmental Careers class each quarter to speak about their experience, but this is a small percentage of students who graduate. Anecdotal evidence indicates that graduates are finding employment in strong local companies and agencies as a direct result of the Energy Management Technician Lab. The Kirsch Center hopes to build an organized alumni system for the Environmental Services Department over time.

Enlighten Culture and Education Foundation
Energy Watch Promotion

About Enlighten Culture and Education Foundation

Founded in 2009, Enlighten Culture and Education Foundation (Enlighten) teaches Chinese language and culture. Two kinds of classes are offered: Chinese as the Heritage Language for grades kindergarten through ten, and Chinese as the Foreign Language for grades one through six. Enlighten teaches weekday afterschool and weekend afternoon programs three quarters a year. San José Unified School District (SJUSD) high school students can receive 10 foreign language credits each year by attending a class at Enlighten.

CECG Focus: Enlighten created a new environmentally themed bilingual curriculum that included family involvement and a community-wide celebration.

Website: enlightenchinese.org

Campaign Accomplishments

- Educated 400 English Mandarin speaking K-12 students about energy efficiency
- Delivered energy efficiency and conservation education through art and video projects
- Promoted student work in restaurants, storefronts, neighborhoods, on the Internet, at a final celebration event, and in classrooms to build awareness about energy use and efficiency in the Chinese community
- Following the successful pilot, Enlighten determined that a new environmental topic will be covered as a thematic unit each year
- Submitted a short film, conceived and produced by Enlighten High School students, to the Midpeninsula Community Media Center's Greenlight Film Festival, earning second place in the Energy Champions category

Enlighten administers a K-12 Mandarin immersion secular Sunday school program that fosters Mandarin literacy and cultural education through various thematic units. Enlighten implemented a school-wide unit around energy efficiency and conservation during the 2012 spring session. The program lasted 11 weeks and involved 400 student participants. School teachers spent the fall session developing specific curricula for elementary, middle and high school age groups. Students researched key environmental topics in depth and presented their findings at their grade level using a range of art and media. They were encouraged to share their ideas about how to make a positive impact at school and throughout the Mandarin-speaking communities in Silicon Valley. Completed projects were celebrated at the culminating celebration event attended by students, teachers, family, neighbors, and friends.

While working on their research projects, students spent time thinking about water conservation, e-waste, climate change, and other topics. They used their Mandarin language skills to communicate complex energy efficiency concepts in school and to the broader community. Both teachers and parents reported witnessing students using energy differently and more efficiently, as well as urging their families to do the same. Parents were excited about the program, and encouraged Enlighten to design more environmentally related projects next year.

Grades Four through Six: Creating a Bilingual Energy Efficiency Handbook

For the youngest students in particular, Enlighten teachers knew that a hands-on project would render a more effective learning experience than lectures. Fourth through sixth grade children brainstormed ways to save energy, conducted research, drew pictures to illustrate the new concepts, and became advocates of the energy reduction strategies that they were learning in both English and Mandarin. Their ideas and artwork were combined into a printed handbook, which was distributed at the final celebration event attended by the families of the school. The handbook—fun and easy-to-read, yet practical and informative—contains energy-saving tips in both English and Mandarin. All students were asked to take three copies home and share them with neighbors and friends. As a result, at least 1,000 people received the handbook.

Grades Seven and Eight: Posters and Dioramas

Grades seven and eight developed a set of posters and dioramas addressing various energy themes. Each student brainstormed three ways to save energy and then created a poster or a diorama to educate others about their ideas using original artwork, photos, and text. The students

Enlighten Culture and Education Foundation
Energy Watch Promotion

created the poster text and diorama explanations in both English and Mandarin. They worked in small teams, which enabled them to discuss concepts and employ their individual talents to portray complex ideas. One diorama displayed a cutaway home that presented energy saving techniques for toilets, electrical outlets, light fixtures, and other miniature details. A finely illustrated poster described the concepts and benefits of passive solar design and shading. The projects were displayed at the final celebration and are currently displayed in the classrooms of a new Enlighten location that serves the Chinese community Sunday through Friday. Students and parents alike can now view the displayed posters and dioramas every day in these classrooms.

Grade Ten: Energy-Themed Film Production

Students at the high school level produced an award-winning film about energy efficiency.

The team that worked on the film had no prior experience in film production. The enthusiastic group nonetheless wrote a compelling script with humor and a strong message. They purchased a state-of-the-art camera and filmed in their homes, at parks, at school, and on the streets where they lived. Each student played a pivotal role scripting, filming, and editing the 11-minute film that included original music recordings, a superhero, and a unique film style. A Professor of Film Production at San Francisco State University taught the students film production basics, assisted with filming and editing, and provided a studio for video capturing and editing. The film was entered into the Midpeninsula Community Media Center's 2012 Greenlight Film Festival, a fellow CECG recipient, and was awarded second prize in the "Energy Champions" award category.

Final Celebration

The final event, in April 2012, united the community to celebrate the work from all three student groups. Each attendee received a copy of the handbook created by the younger grades. The posters and dioramas were displayed, and prizes were given for best project. Finally, the high school students' film was shown and prizes were awarded to the student producers. Prizes included trophies, CFLs, smart strips, shower timers, and Jamba Juice gift cards. Over 1,000 students, families, and other community members attended the event.

Challenges and Lessons Learned

Due to contracting delays at the start of the grant cycle, Enlighten was unable to begin work on curriculum design for the fall quarter, which was the initial target period for the energy theme. The school was able to switch the order of planned themes so that their cultural unit, generally held in the spring semester, was taught during the fall, and the energy theme was delivered in the spring. This flexible schedule helped the school avoid disruptions in programming as a result of the delay.

Enlighten had hoped to capture energy use information from families' utility bills at the beginning and end of the unit in order to track changes in energy use among the students' families following the unit. This ambitious idea was dropped after staff realized the administrative burden of collecting the data. Nonetheless, a positive result came of this change in plan, as Enlighten staff helped several of the families create online PG&E accounts.

Teaching environmental topics in a fun, hands-on manner, in a non-traditional, community-centered environment, helped students connect with the material in a way that might not occur in a traditional classroom setting. The bilingual projects were especially valuable for non-English-speaking family members, for whom the handbook or poster may have been their first exposure to energy saving tips in their native language. Students discussed energy efficient products, conservation behaviors, and environmental impacts with their families, friends, and neighbors. Since they did their own research in all three of the projects and connected personally with the material, the students became youth energy ambassadors in their community. After the unit was completed, they demonstrated and reported increased environmental awareness, encouraging their family members to save energy as well. One of the students who participated in the film announced, "Now my whole family cares about saving energy!"

Green Energy Agents
Youth Energizing Communities

About Green Energy Agents

The Green Energy Agents (GEA) program aims to turn the challenge of increasing home efficiency into an opportunity for young people. GEA educates youth groups about energy efficiency, trains them to be energy efficiency ambassadors, and offers them alternative fundraising opportunities by teaching them and their youth organizations to sell home efficiency products in their communities.

CECG Focus: GEA applied their training and fundraising model to youth groups in Santa Clara County, adjusting their approach for diverse audiences.

Website: greenenergyagents.org

Campaign Accomplishments

- Transformed 28 youth ages 12–17 in youth and faith based organizations to become environmental stewards and ambassadors for energy efficiency and conservation
- Customized interactive curricula and capacity-building for environmentally-focused fundraising
- Coached youth on leadership, communication, and presentation skills
- Trained youth in the benefit of energy and water efficient products
- Built community awareness around energy efficiency behavioral changes

The Youth Energizing Communities campaign deployed energy and environmental stewardship education, combined with an opportunity to replace traditional fundraising items with water and energy efficiency products. Previously, GEA had successfully implemented the program in Racine, Wisconsin. New to Santa Clara County, they developed relationships with three local organizations to pilot the program: the First Congregational Church of San José, the First Congregational Church of Palo Alto, and the Boys & Girls Clubs of Silicon Valley's Smythe Clubhouse (a CECG recipient). Youth members ranged in age from 12–17. The pilots allowed GEA to test their approach with three diverse audiences, refine the curriculum, and engage broader communities in conservation.

GEA combined a "train the trainer" curriculum for youth group leaders, an environmental stewardship curriculum, and training in high-end energy efficiency product sales. Within this framework, they catalyzed energy efficiency behavior changes among both youth and adults, and graduated 28 youth as "Green Energy Agents." Through community events at the three locations, 137 young people made eco-pledges and 91 families engaged with GEA to learn about energy efficiency. The Smythe Clubhouse and the First Congregational Church of San José took advantage of GEA's capacity building for fundraising with environmental products, and received enthusiastic feedback from their communities.

Becoming a Green Energy Agent

GEA customized the curriculum at each site using their expert environmental science knowledge and creative teaching methods. Each of the six one-hour sessions addressed a new topic using creative activities to spark the youths' imagination. Leaders used interactive games and activities to solidify concepts, test knowledge, and stimulate thinking and action. The units integrated presentations, writing, and feedback, which developed the students' confidence and strengthened environmental values. Tailoring the activities to each individual group, they made the material easy to absorb, and the youth were engaged from the moment they entered the room.

Finally, GEA taught the youth to recognize, use, and sell high-end energy and water efficiency products. They encouraged organizations that fundraise for youth activities to replace other sales items, such as candy or wrapping paper, with efficiency products. This shift furthered the youths' development as environmental ambassadors, providing a practical avenue for them to encourage energy efficiency practices among their families and community.

Green Energy Agents
Youth Energizing Communities

GEA challenged the youth to view the environment in new ways. For example, the unit on water opened with a video from the television series *Glee*, showing Gwyneth Paltrow singing and dancing in the rain. The video captured the members' attention, and provided a platform to discuss where water came from and how they used it. The students were then asked to list words associated with water—rain, pond, fog, etc.—as quickly as possible, and accompany each word with a physical action, making the activity fast and interactive. They learned about the water cycle and completed water-related questionnaires. At the end, each youth picked a water product to present and pitch its benefits to the rest of the group.

Similar units were taught on coal, light, air, earth care, and building science. The units were fast paced and kept the youth on their feet—often literally. When the units were over, each youth pledged one action they would do upon becoming a Green Energy Agent. The students recorded their pledges on a commitment poster. In exchange, each received an energy saving kit containing a shower timer, CFL, outlet gasket, toilet tank bag, faucet aerator, LED night light, filter whistle, Green Energy Agents t-shirt, and energy saving tip wheels.

The youth became knowledgeable in energy efficiency practices and enthusiastic about environmental stewardship. They grew confident in their leadership and communication abilities, and skilled in the benefits and sale of energy efficiency products.

Energizing Youth Leaders

Youth leaders at each site learned to teach environmental concepts and participated actively in the trainings. At the faith-based organizations, leaders linked the materials to the group's faith. During the air unit, for example, they found references to breath in their scriptures, and helped make spiritual and scientific connections between breath and the environment.

Youth leaders provided an important link between GEA staff and the youth. After the program at the Boys & Girls Clubs, leader Michelé Davis noted "a change in the kids. They walk around the Club making sure that the lights and the computers are off when they're not being used—even in the staff offices. They are now taking the opportunity to teach other youth what they learned this summer. They want to teach others how to become Green Energy Agents. The kids are doing their own research."

First Congregational Church of San José: Success in an Inclusive, Middle Class Organization

The First Congregational Church of San José serves 500 members. The middle school youth group had nine active children who met twice a week. The church and members' parents were open to the GEA model, appreciated the information presented, and felt that the fundraising aspect was a win-win for everyone. The youth leader was enthusiastic about the materials. With coaching from GEA staff, he delivered six units to his group in three weeks. The parents, primarily middle-income homeowners, were environmentally savvy and eager to learn about products that could save energy and money at home.

On Earth Day, the youth presented what they had learned to the entire congregation during a period usually allocated for a sermon. After the presentation, they used their knowledge and newly acquired sales skills to present energy efficiency products to church members during their coffee hour. Within an hour and a half, the youth had sold over 40 items, making more than $150. Church leaders decided to extend the sale for two more weeks, and the youth and youth leaders expressed ongoing interest in installing energy and water saving devices in their homes.

The Smythe Clubhouse: Unique Adaptation in a Disadvantaged Community

At the Smythe Clubhouse in San José, GEA delivered the unit to the Keystone Club, a youth leadership development program. The youth were preparing for their role as "hosts" at the upcoming Energy Fair. The Club sought out GEA to catalyze the youths' environmental learning and prepare them to be environmental ambassadors at the fair.

While the youth leader actively participated in the sessions, GEA led the training. The youth were motivated to save energy. Club members were from low-income families, with minimal exposure to environmental topics. Before the

training, members scored an average of 38 percent on a diagnostic test about energy efficiency and conservation. They exhibited a 47 percent increase in environmental knowledge at the end. Reinforcing the new knowledge, members showed a deep sense of hope for their families, community, and environment, and soaked in the new information.

In one activity, the youth drew a blueprint of their home to identify areas where energy was wasted. The students thought through solutions, such as weather stripping or thermostat adjustments. They had faith in their ability to change their situation and were hungry for new ideas.

After the training, GEA staff assisted the youth in creating interactive booths for the Energy Fair. The youth asked fair attendees to sign Eco Pledges in return for "starter" kits of energy efficiency products. Participants received CFLs for playing a guessing game about which futuristic energy saving devices were real. The Keystone Club members raised $100 for the Smythe Clubhouse in energy efficiency product sales at the fair.

GEA at the First Congregational Church of Palo Alto: Overcoming Challenges in an Affluent Community

The First Congregational Church of Palo Alto serves 800 members, and the youth group had 10 active middle school children. GEA quickly saw that this group needed a redesigned curriculum. The youth were from privileged backgrounds with high environmental knowledge, scoring 80–90 percent on the pre-test of environmental knowledge. They were reluctant to spend their Tuesday evenings in a school setting. Their parents had high expectations for the program; many had installed solar panels on their homes, worked for cutting edge technology firms, and had a strong sense of being environmentally progressive.

The youth leader was not comfortable presenting the curriculum, so GEA again trained the group directly. In the first sessions, staff had difficulty impressing information upon the youth and could not excite them with a traditional curriculum. Working with the youth leader, GEA developed new ways of tapping into the youths' values. They empowered the youth to experiment with energy efficiency products and role play. The new approach worked. An especially engaging unit involved a game of jeopardy where the youth tested their environmental knowledge and competed with one another.

By the end of the program, the youth were excited by the material. This group opted against the fundraising portion, but expressed a willingness to consider it in the future.

Challenges, Best Practices, and Lessons Learned

Through trial and error, GEA honed strategies to optimize class time and get student participation. The curriculum was most effective when it utilized games, tactile experiences, and practical applications that were directly relevant to the youths' lives. At all sites, keeping lecture time under 30 minutes was important to prevent loss of interest and to ensure knowledge retention. The four-to-six week period worked well keeping the material exciting and allowing time for the youths' practical knowledge and confidence as ambassadors to solidify. At all sites, the students rated discussions about futuristic solutions as their favorite activity.

The major challenge was engaging diverse groups. GEA sees their model as consisting of two primary components: environmental stewardship training, and the conservation-oriented fundraising opportunity. Having successfully deployed the model previously, GEA was surprised that more groups in Santa Clara County were not interested in the fundraising aspect. Several groups already had established fundraising channels and were not interested in replacing them. GEA had hoped to deploy their program in a minimum of six sites through this campaign, but were only able to gain entry into the three groups described here. Staff felt that the resistance to alternative forms of fundraising may have been partially to blame.

At the two sites that took advantage of it, the youth enjoyed selling and the sense of importance that it gave them. As intended, they found it provided a useful forum to apply their in-class learning.

GEA's original goal of creating a streamlined lesson plan to facilitate the "train the trainer" model also proved challenging. Only one leader adopted and presented the curriculum without GEA staff directing the sessions. However, even this leader asked GEA for additional support at every session. GEA is exploring ways to improve the model.

GEA's model rests primarily on the value of utilizing youth to change the attitudes of adults regarding environmental stewardship. Yet, throughout the program, GEA saw a deficit in parent support. Originally, they had relied on the youth leaders to engage parents. They had hoped that parents would play an active role in reinforcing and amplifying their children's new knowledge. However, at all sites, for various reasons, youth leaders were unable to effectively involve parents. GEA is exploring how future partnerships might effectively include families.

MEDIA CENTER

Midpeninsula Community Media Center
The 2012 Greenlight Film Festival

About Midpeninsula Community Media Center

The Midpeninsula Community Media Center (Media Center) empowers people to speak and act on behalf of their communities. Through television and the Internet, the Media Center creates and distributes programs that celebrate local achievements, education, cultural exchange, arts, and civic engagement. Each year, the Media Center hosts the Greenlight Film Festival, a celebration of Earth Day featuring film projects that explore environmental citizenship and show how individual actions can reduce environmental impact.

CECG Focus: The Media Center expanded the Greenlight Film Festival to include expanded outreach, an Energy Champions award, and related curricular materials.

Website: communitymediacenter.net

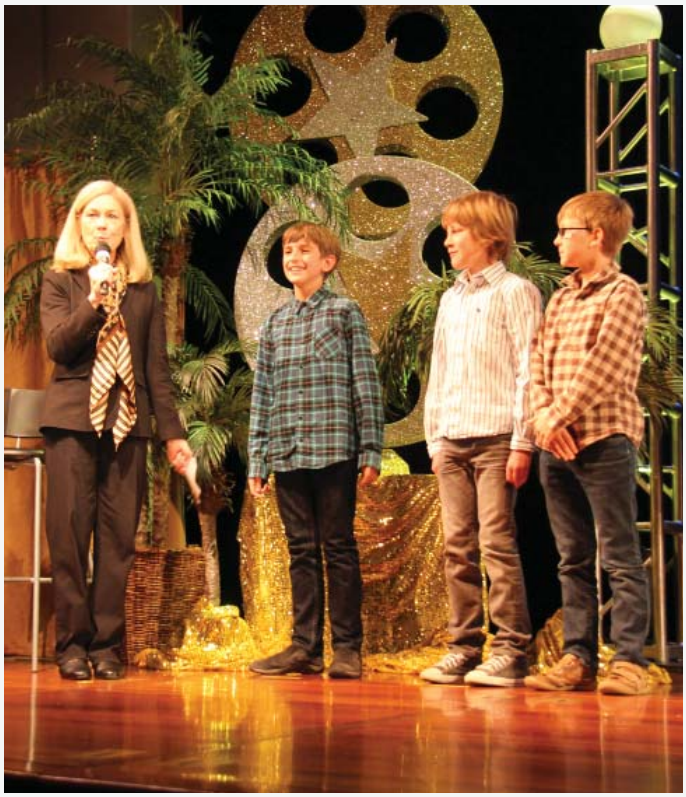
Campaign Accomplishments

- Launched a new "Community Energy Champions: Conservation and Efficiency" award category
- Broadened the impact of the annual festival by attracting more film entries from a broader audience and developing educational materials based on the winning films
- Attracted 127 student producers and achieved greater county-wide representation in the festival
- Created a network of more than 120 teachers who will use the newly developed educational materials and films in sixth through twelfth grade classrooms

On Earth Day 2012, the Media Center held its seventh annual Greenlight Film Festival. The festival features youth-produced films exploring environmental stewardship and individual responsibility. The Media Center provides students, many of whom are first-time producers, with free technical assistance with their film production.

In addition to the three customary age-based awards categories, the Media Center added a new category in 2012: "Community Energy Champions: Conservation and Efficiency." The Energy Champions Award was bestowed on the film that most creatively inspired viewers to save energy. Seven volunteers from local environmental and community groups judged the video entries. The festival featured an Academy Awards-style public viewing event, with prizes for the winners and "green gifts" for all attendees.

With CECG support, the Media Center dramatically expanded the festival's reach, tripling producer participation over past years and achieving all-time high attendance. The Media Center also expanded the festival's impact by using the winning films as a springboard for classroom environmental education. More than 120 teachers and youth leaders from middle and high school classrooms across Santa Clara County received DVDs of the films, along with thought-provoking educational materials.



The 2012 Greenlight Film Festival

The Media Center's goals for the 2012 event were to double the number of entries, increase online viewership, and grow event attendance to 200. The number of entries increased from 13 films, created by 38 producers, in 2011, to 49 films, created by 127 producers, in 2012. The event's success encompassed more than these statistics alone. The Media Center's Executive Director noted that "adding the Energy

Midpeninsula Community Media Center
The 2012 Greenlight Film Festival

Champion award brought a new level of enthusiasm to the festival. For the first time in seven years, the audience was alive. Kids got their parents involved and there was an enlarging experience. Participants came with their family and friends and there was an exciting buzz..." The youth film producers were honored by the fanfare, large audience, and by the theatrical introduction to each finalist video. Emcee Peter Drekmeier, former Mayor of Palo Alto and co-founder of the original Earth Day 1990, added an additional level of import to the event.

The first prize in the new Energy Champion category went to a brother-sister team from San José. Their whimsical yet homey film takes viewers on a journey through a day in the life of their family's sustainable lifestyle. The second place film, "I Have a Dream," was directed by a student from Enlighten Chinese School, a fellow CECG grantee. It featured six actors who emphasized how "small changes can make a big difference," and how youth actions can collectively impact energy conservation. The students involved expanded their environmental knowledge through the process of producing the film. Even their schools were inspired: Enlighten Chinese School declared that they would encourage their high school students in the following year to submit a film to the festival.

Expanding Outreach

Prior to the 2012 festival, efforts to solicit film submissions had concentrated on schools in northern Santa Clara County. As a result, films generally came from schools located in and near Palo Alto.

To increase both the number and diversity of submissions, the Media Center expanded outreach to nonprofit partners. They hoped that partnering with fellow CECG grantees, sponsors from the film's previous years, and others would bring entries, boost festival attendance, and generate requests for the final educational packages. Other CECG organizations sent email blasts to their own lists, including to educators across the County. Media Center staff contacted 35 churches directly and over 200 additional congregations via church coalition e-news. They sent announcements to numerous Girl Scout troops, but only spoke directly with two. They also collaborated with Environmental Volunteers, a nonprofit aimed at promoting the understanding and appreciation of the environment through hands-on science education. Environmental Volunteers sent an email blast to the teachers in their network, encouraging them to contact the Media Center and get involved in the festival.

The Media Center worked with the cities of Palo Alto, Mountain View, and Sunnyvale, who had been joint sponsors of the Greenlight Film Festival in previous years. Each of these partners contributed important material resources and outreach to schools in their respective communities. Cities are invaluable partners not only because of their broad outreach networks, but also because of the validation they provide to the festival and to the Media Center itself. Ultimately, to staff's knowledge, it was not clear that any of the final submissions resulted from the broadened outreach efforts. Instead, the bulk of submissions and participation came from existing contacts and direct relationships – primarily teachers – as well as those referred to the Media Center by existing individual connections.

A Long Road to Reaching Teachers

With the support of CECG funds, one of the new components of the 2012 festival was producing post-festival educational packets designed for teachers to use in classrooms. Each packet included a DVD of the winning films and a four-page handout with energy efficiency tips and environmental information. The Media Center's original goal was to deliver these materials to 65 interested teachers. The Media Center had anticipated locking in the intended 65 teachers prior to

Midpeninsula Community Media Center
The 2012 Greenlight Film Festival

the festival as part of the outreach for film submissions. Here, the Media Center encountered significant barriers. Teachers lacked publicly available phone numbers or email addresses, as many schools intentionally erect obstacles to protect them from unsolicited contacts. For those whom the Media Center was able to contact, curricular schedules were often already full.

Hundreds of cold calls and personal visits to schools yielded only 16 requests for media packages prior to the festival. Media Center staff revived their outreach efforts after the festival with the schools that had generated finalists, but by the September following the festival, only 29 teachers had signed up.

After months of effort with frustrating results, a new Youth Services Coordinator established a relationship with the Santa Clara County Office of Education (SCCOE). This enabled contact with the Director of Curriculum and Instruction, who was in charge of distributing educational materials to all districts in the County. SCCOE gave the Media Center a booth at an educational fair for teachers representing 27 different school districts. Staff distributed 100 packages and obtained contact information for the interested teachers in return. Demand at the fair was so high that they ran out of materials and had to mail additional packages afterwards.

Ultimately, the Media Center delivered media packages to two Girl Scout Troops and 150 interested teachers. The lesson plans are being delivered during the current semester, and participating teachers will provide feedback in early 2013.

Challenges and Lessons Learned

The Media Center surpassed its goals for film entries, festival attendance, and teacher engagement for the post-festival educational materials. But they experienced significant challenges with outreach, including reaching some of the new target communities whom they had hoped would diversify their audience and pool of producers. Engaging interested student and youth groups was a tricky task. It demonstrated both the difficulties in identifying potential partners and the overwhelming influx those schools and organizations face in receiving new requests and incorporating new materials.

Tracking outreach was also a challenge. The Media Center marketed the festival through scores of new channels, and there was no way to track where and when the information was then forwarded to others. As the deadline for submissions approached, the Media Center had received few requests for their free technical assistance, and had no way of gauging how many entries to expect. Staff was consequently "shocked" when they discovered, on the day that films were due, the extent to which they had exceeded their goals.

The most successful outreach was generated by a volunteer who reached out to his teacher contacts in the City of Mountain View. A relatively small number of eager schools and teachers were responsible for the majority of student involvement. Accordingly, the Media Center plans to focus on nurturing partnerships with specific schools and teachers for future outreach. While they will not abandon their new marketing tactics altogether in future years, experience showed that word of mouth among teachers and youth group leaders was the most effective approach to growing the festival.

To further formalize their new teacher and community relationships, the Media Center plans to build a Steering Committee of interested teachers and youth group leaders, drawn from collaborating organizations and cities. The Steering Committee will help shape future festival themes, recruit students from their own networks, and conduct outreach for the supplementary media packets.

Rebuilding Together of Silicon Valley
Resource Coordinator Training Project

About Rebuilding Together of Silicon Valley

Rebuilding Together affiliates across the country organize thousands of volunteers per year, both trained and untrained, to renovate the homes of low-income senior and disabled residents to increase warmth, safety, and independence. All rehabilitation work is provided free of charge, leveraging the skills and generosity of the community. Local affiliate Rebuilding Together Silicon Valley (RTSV) was established in 1991 to serve homeowners in need across Santa Clara County. In 2010 alone, RTSV provided improvements and upgrades for over 1,700 low-income homeowners. Their Green Program adds health factors and energy savings to their services, but was minimally-resourced prior to the Community Energy Champions program.

CECG Focus: RTSV introduced a specialized volunteer training program and entrenched energy efficiency education and upgrades into their program offering.

Website: rebuildingtogether-sv.org

Campaign Accomplishments

- Created in-person and online training modules and ahandbook to prepare Volunteer Resource Coordinators to be energy efficiency ambassadors, providing low-income senior, disabled, and isolated homeowners with energy efficiency education, upgrades, and resources
- Trained 75 Resource Coordinators as energy efficiency ambassadors
- Conducted outreach to 2,000 general volunteers
- Provided direct energy efficiency education and services to over 100 homeowners

Through their successful "Safe at Home" program, Rebuilding Together Silicon Valley (RTSV) builds a volunteer army to congregate for the biannual Rebuilding Day. In a single day, over 600 volunteers deliver safety and accessibility renovations to as many as 60 homeowners. Through this grant, RTSV created a new energy efficiency training module to bring utility bill savings and energy awareness to low-income senior and disabled homeowners throughout Santa Clara County. The training module has increased RTSV's ability to retain volunteers, and all program recipients can now receive energy efficiency upgrades and education.

Volunteer training proved effective in preparing community members to interact with the clients. The trainings received favorable feedback from attendees, who spend up to eight hours installing measures and educating homeowners. In the three Rebuilding Days conducted since this grant began, RTSV trained 75 Resource Coordinators, provided direct energy efficiency education and services to over 100 homeowners, and conducted outreach to 2,000 general volunteers. Energy efficiency measure installations take just three hours. Those conducted on the October 2012 Rebuilding Day are expected to yield an average $121.55 in annual savings for each of the homeowners served. Behavior changes that result from the homeowner education could push these savings even higher.

Creating Energy Efficiency Ambassadors

RTSV began incorporating energy efficiency and resource conservation into their Green Program prior to this grant. They pursued resource conservation through a waste recycling program to reduce landfill impacts; included basic energy and water efficiency improvements in their repair program; and distributed basic resource efficiency information.

Rebuilding Together of Silicon Valley
Resource Coordinator Training Project

Through a new training enabled by CECG funds, RTSV expanded the energy efficiency retrofits and the homeowner energy efficiency education provided on Rebuilding Days. The training is now entrenched within the organization in both in-person and online modules. RTSV also created an energy efficiency manual for homeowners, available in English, Spanish, and Vietnamese. The manual is distributed to all homeowners who receive services, and was made available to RTSV's many partners.

The new training is geared toward Resource Coordinators—key volunteers deployed on Rebuilding Days—and addresses the organization's mission, Green Program goals, and the tasks required for energy efficiency and water conservation retrofits. Trained Resource Coordinators spend the day with the homeowners, implement energy efficiency improvements, conduct homeowner education, and manage onsite project resources. In each home, they install CFLs, power strips, faucet aerators, low-flow shower heads, laundry racks, outlet/switch gaskets, and door sweeps. They insulate water heater pipes, clean refrigerator coils, adjust refrigerator/freezer temperature, and assist homeowners with water heater temperature adjustments.

Armed with a sense of purpose and knowledge of simple energy efficiency and conservation tasks, the trained Resource Coordinators have become energy ambassadors in their own communities, spreading the word of energy efficiency to their family and friends. Staff observed that trained Resource Coordinators returned complete paperwork, provided more energy upgrades, and educated the homeowners more thoroughly than those who did not attend the training.

RTSV aimed to recruit and train one Resource Coordinator for each home project. The organization cultivated strong relationships with these volunteers, so that they would return year after year. Both the spring and fall 2012 Rebuilding Days saw increases in attendance as well as return rates for Resource Coordinators compared with previous Rebuilding Days. With the new Online Resource Coordinator Training, these trends are expected to continue.

Online Training

To ensure that every Resource Coordinator was thoroughly trained prior to Rebuilding Day, RTSV created a 37-minute online training video covering all of the information provided in the formal, face-to-face training. The online training provided an option for those unable to attend in person. Volunteers who used the online training tended to be technically savvy sponsors, happy to learn from their desk.

Those who complete the online training fill out a survey enabling staff to know whether the volunteers have been adequately trained. After the survey is submitted, staff contact the volunteers to ensure they are confident and ready for Rebuilding Day.

The online training has been a boon to the program, saving time for both volunteers and staff. RTSV is able to train more Resource Coordinators, thereby providing better and more comprehensive service to their clients on a maximum number of Rebuilding Day projects.

Educating Homeowners

RTSV is an ideal conduit to provide energy efficiency upgrades and education to a unique population. With a strong, 20-plus year history in this arena, they are adept at working with low-income seniors and people with disabilities. Recipients know that the volunteers are there because they care, that there is "no catch," and that the installed upgrades and services will increase their home's health and safety.

The volunteer Resource Coordinators provide homeowner education alongside renovations, leaving behind a manual that explains the installed measures and contains tips to further reduce home energy use. Throughout the day, Resource Coordinators speak with the homeowners, explaining the purpose behind the energy efficiency measures and expected savings.

At Homeowner Receptions, which occurred approximately two weeks after each Rebuilding Day, homeowners came together for storytelling and visiting, and staff distributed materials about further steps to "go green."

Rebuilding Together of Silicon Valley
Resource Coordinator Training Project

Collaboration

As a volunteer-driven organization, RTSV engages outside groups who can provide volunteers in alignment with the Rebuilding Together mission. Ideal collaborations for RTSV's Green Program, therefore, are with organizations that provide eager, reliable, and engaged Resource Coordinators for Rebuilding Days. RTSV used partnerships with PG&E, Acterra (another CECG grantee), and other organizations to distribute vetted materials to homeowners, thereby maintaining consistent messages.

RTSV also collaborated with San José's Center for Employment Training (CET), resulting in a cadre of new Resource Coordinators. CET hosted a Jobsite Safety workshop at Rebuilding Together, and six students became Resource Coordinators. Since these students already received weatherization training, they were ideal additions to the Resource Coordinator group.

Challenges and Lessons Learned

While standing as a successful volunteer program, RTSV does face ongoing challenges in finding and retaining volunteer Resource Coordinators. Trends are improving with the enhanced in-person training and online training module. Those who received training proved more effective at deploying energy efficiency services than those with no training. The online module stands not only to increase the proportion of Resource Coordinators who are trained, but also to provide a model for similar volunteer programs around the country.

CECG support helped RTSV to solidify the Resource Coordinator role as the overarching provider of conservation services. For example, RTSV offers metal recycling services. Previously, volunteers would drive trucks to retrieve scrap metal on Rebuilding Day, but not every site would be visited and it was difficult to recruit volunteers for this job. With the new training, Resource Coordinators are now in charge of the "Heavy Metal Haul-off" for their site. They learn what the recycling centers will accept, and are responsible for securing a truck to bring their load(s) back to the warehouse. This has streamlined collection, and enabled RTSV to collect more metal. Resource Coordinators are also trained in hazardous waste recycling, including CFL and paint disposal, and provide one-on-one education on environmental waste to homeowners.

Budget constraints are the main challenge to RTSV's ability to expand their energy efficiency services and methods to retain volunteers. The energy efficiency measures currently addressed can be completed without disruption to the other health and safety repairs taking place. Eventually, RTSV hopes to offer a full energy audit for each home prior to Rebuilding Day. They would also like to focus on national energy and health initiatives, including indoor air quality. Finally, they would like to offer year-round Resource Coordinator trainings, as opposed to only in the lead-up to each Rebuilding Day. RTSV intends to continue growing as a trusted authority in the community on green building and energy efficiency.

RTSV staff believe that their program could easily be duplicated in communities across the country. RTSV has received interest from numerous Rebuilding Together affiliates, and has shared the model and training materials with them.

Community Energy Champion Grantee Case Study

Sacred Heart Community Service
Sacred Heart Saves Energy

About Sacred Heart Community Service

Founded in 1964, Sacred Heart Community Service (SHCS) addresses poverty in Silicon Valley by bringing together the strengths and resources of the community. Through a broad array of services and community involvement initiatives, SHCS is making a real impact in the lives of working poor families. In 2011, SHCS served 56,000 customers and hosted 8,500 volunteers. SHCS is a gathering place where people from throughout Santa Clara County can come together in pursuit of a better life.

CECG Focus: SHCS augmented energy efficiency outreach in targeted low-income, multilingual neighborhoods of San José.

Website: sacredheartcs.org

Campaign Accomplishments

- Engaged and trained over 80 SHCS volunteers to conduct outreach, canvassing over 3,300 low-income San José households
- Increased energy efficiency awareness and enrollment in federally funded energy programs, resulting in over 2,700 households receiving bill assistance and 380 homes receiving weatherization services
- Taught renters to advocate for their rights regarding energy efficiency and related social services
- Assisted non-English speaking tenants in filling out program forms
- Held home energy savings educational workshops

Sacred Heart Community Service (SHCS) deployed a multifaceted outreach campaign in low-income, underserved, primarily Vietnamese- and Spanish-speaking neighborhoods in San José. The campaign aimed to increase the number of qualified residents accessing the federally-funded Low-Income Home Energy Assistance Program (LIHEAP) and Weather Assistance Program (WAP), particularly among hard-to-reach communities.

SHCS used a combination of door-to-door canvassing, in-home visits, and workshops to educate and engage residents about energy efficiency and bill assistance resources. Community workshops and home visits included education on tenants' rights so that residents could successfully obtain the landlord authorization required for weatherization. The campaign's success helped SHCS to weatherize 380 homes. They received over 2,600 applications for LIHEAP which provides a one-time utility bill credit of up to $298 for eligible low-income households. SHCS reported that the average monthly savings from weatherization was $45 per household, or $540 annually—or, as one client stated, this amounted to "a month's worth of food for my family."

A Nimble and Persistent Campaign

SHCS is well-known in San José for its diverse community services, including housing assistance, a food pantry, "Gracie's Clothes Closet," and homeless prevention. Their experience and understanding of those they serve make them well-positioned to educate the community about energy conservation and efficiency. One staff member noted that "our community needs to be blanketed with information several times before they sign up for services;" however, experience has proven that once residents are interested in programs, they "find their way to Sacred Heart" to inquire and apply.

The four neighborhoods targeted for this campaign were selected based on income level, previous outreach campaign overlap, and location. Staff learned that the best way to inform these communities about the energy saving programs is through conventional door-to-door canvassing. Over the

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year of the campaign, the small army of SHCS volunteers canvassed more than 3,300 households – nearly five times their original goal of 700.

In addition to placing door hangers inviting residents to multilingual workshops, volunteers conducted door-to-door "knock and talks" to inform residents of energy savings programs. In one neighborhood, they found that many families attended a single Parish that held two masses per day for the Vietnamese community. With the parishioner's permission, SHCS conducted outreach at the masses to sign people up for home energy efficiency workshops.

SHCS staff explored other outreach methods such as community fairs, radio interviews, inserts in the emergency food baskets distributed to families in need, off-site placement of staff at other organizations, and in-service training for other agencies. They conducted a three-month Public Service Announcement and several radio interviews. Due to the high expense, the call-in radio announcements were extremely short and had little success.

To assess the success of the different outreach methods, SHCS marked distributed applications with codes to easily track their origins. The most successful outreach was conducted in churches and congregations with predominantly Vietnamese members.

Energy Efficiency Empowerment through Education

Small workshops empowered residents to take energy savings into their own hands and become energy efficiency ambassadors within their communities. In partnership with Acterra, SHCS taught residents easy ways of saving energy, and provided another opportunity for residents to sign up for LIHEAP and WAP. Workshop attendees received a "Do-it-Yourself energy saving kit" that included outlet gaskets, faucet aerators, CFLs, low-flow showerheads, retractable clotheslines, and weatherstripping. Nearly 100 people attended the April and May Foster Parent workshops alone. In September 2012, SHCS conducted a workshop for 63 staff members.

Almost all workshop attendees came as a result of either a direct SHCS client relationship or from services offered through other agencies. Another 14 attendees reported coming as a result of the canvassing effort.

SHCS hopes that workshop attendees will become Energy Ambassadors in their own neighborhoods. They encourage households that have accessed the assistance programs to become ambassadors for the programs and hold open houses to educate their neighbors.

Leveraging the Volunteer Base

SHCS has a database with thousands of volunteers, who come from local companies, other nonprofits, public and private schools, universities, and the community at large. Each day, SHCS hosts 80–100 volunteers assigned to different program areas, including the warehouse, self-sufficiency programming, or community education.

SHCS mobilized volunteer groups to canvass specific neighborhoods where residents face multiple barriers to program participation, and have been difficult to reach through other methods. They partnered with Acterra, a fellow CECG recipient, to train volunteers in energy efficiency prior to conducting outreach.

SHCS began with six volunteers to distribute the first round of marketing materials. Door hangers in English, Spanish, and Vietnamese reached 420 households in just two weeks. From this initial push, staff calculated how many volunteers they would need to reach the households targeted for outreach over the duration of the campaign. For each canvassing drive, they gathered, trained, and deployed a different volunteer group to connect to the neighborhoods, deliver door hangers, and invite residents to workshops.

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Tenants and Landlords

Tenants in low-income communities were often unaware that they had a right to receive weatherization and bill assistance services if they qualified. Landlords were also unaware, and therefore reluctant to authorize work on their properties. Furthermore, once upgrades were complete, landlords often felt they would be justified in raising rents. However, raising rents immediately after an upgrade is illegal; SHCS required landlords sign a release prior to any work being conducted. SHCS staff educated tenants and landlords, wrote letters on behalf of tenants to explain their rights, and ensured that qualified residents benefited from utility assistance and weatherization services.

In just three months, SHCS provided bill assistance to 2,728 households and WAP services to 420 households. Several participating landlords have expressed interest in using SHCS weatherization services on their other properties.

Challenges and Lessons Learned

Word-of-mouth and collaborative relationships remain important sources of program advocacy. A majority of referrals for this campaign resulted from other agency services and existing client relationships. Prior to launching the volunteer-driven outreach campaign for LIHEAP and WAP, SHCS had difficulty engaging community members in this new area of programming. Once the campaign launched, the diversity of their program offerings only enhanced their outreach efforts. When energy savings programs were offered alongside existing services, a larger base of clients gained access. Utilizing a holistic strategy made SHCS's services more tangible and relevant to the needs of low-income, multilingual residents.

While intensive in terms of personnel hours, the canvassing campaign did help SHCS staff better understand their target populations' needs. Identifying community leaders and learning where residents congregated allowed volunteers to more efficiently spread messages to a larger audience.

SHCS is a unique organization in that they receive large government contracts and yet have extensive grassroots experience. As an active community partner, they remain up-to-date on local policies and initiatives, and continuously seek new ways to serve their target populations. They offer a wide range of services, remain lean in staffing, and mobilize armies of volunteers for productive client engagement. While this model is cost effective, it constrains management activities such as program documentation and reporting. This posed challenges for monitoring and evaluation. However, the campaign experience bolstered SHCS's relationship with the City of San José via the Silicon Valley Energy Watch and other City programs; their ability to provide required documentation and analysis also improved along the way.

San José State University
Green Ninja Energy Reduction

About The Green Ninja Project

The Green Ninja project is a collaborative effort between scientists, educators, and artists to create compelling experiences illustrating the connections between humans and our changing climate. Based on the Green Ninja, an animated climate action superhero developed at San José State University (SJSU), the project aims to educate young people about climate and energy, and then give them the tools and inspiration to do something about it. The Green Ninja YouTube channel (youtube.com/greenninjatv) currently gets about 100,000 views per month. The project includes faculty from the College of Science, College of Humanities and the Arts, and Spartan Film Studios. It has prior support from the National Science Foundation and NASA.

CECG Focus: The Green Ninja project team created and promoted an energy efficiency curriculum and youth contest based on the Green Ninja.

Website: sjsufoundation.org/greenninja.info

Campaign Accomplishments

- Designed, developed, and launched the Green Ninja Smart Energy Contest and related curricular materials, which leverage Smart Meter technology and promote personal actions inspired by the Green Ninja
- Partnered with the Bay Area Earth Science Institute and others to promote the contest for application in sixth to twelfth grade classrooms
- Promoted the project and contest results through online social media
- Taught students to track household energy consumption using their PG&E Smart Meter
- Reported an average energy use reduction of 15 percent among students who have completed the contest

The Green Ninja character was initially created for a short animated film called "Footprint Renovations," designed to teach environmental concepts to children. The Green Ninja Energy Reduction Project aims to reduce household energy use through a Smart Energy Contest for students in grades six through twelve. To participate in the contest, students watch the film, examine their energy use behavior, review smart meter data, and measure energy use at home. The contest is promoted as a fun yet useful home exercise to understand energy, which is then explored further in classrooms. To increase adoption of the concept among teachers, SJSU provided three sample curricula. The grade-specific lesson plans educate the students on energy efficiency and increase contest participation.

The Smart Energy Contest prompts students to examine energy use in detail and learn about efficiency actions. Using their own Smart Meter data, students track energy use for a two-week period after making changes in behavior or installing energy efficiency measures, and compare it to the period immediately prior. The data fosters interesting classroom discussion in the service of promoting long term energy conservation.

Building Teacher Capacity

The ability of teachers to understand and relate to the subject matter they are teaching is central to student learning. If teachers are not comfortable with the topics of energy and conservation, they are less likely to incorporate the activities and contest effectively in their classrooms. By educating teachers on the fundamentals of energy use, SJSU

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Green Ninja Energy Reduction

empowered teachers to successfully implement the Green Ninja classroom materials.

The Green Ninja project team partnered with the Bay Area Earth Science Institute (BAESI), a teacher professional development network, to connect with K-12 teachers. Staff gave 30–60 minute presentations to teachers participating in three BAESI climate and sustainability workshops. The presentations used demonstrations and hands-on activities to educate teachers on various aspects of energy use. Participants learned how to measure and calculate energy use (kWh), cost (in dollars), and CO2 emissions. Staff then shared the goals and benefits of the Smart Energy Contest. Partnering with BAESI gave SJSU an excellent opportunity to engage an interested group of teachers in the contest. As a result of the workshops, over 30 teachers—about half of the attendees—signed up to implement the contest in their classrooms.

The workshops also helped the project team to better understand the challenges teachers face. Several teachers wanted to implement the contest, but had limited flexibility to alter their set curricula. Based on this feedback, SJSU restructured the contest to be more streamlined and to accommodate curricular restrictions.

Through BAESI and social media outlets, 56 teachers expressed interest in conducting the contest in their classrooms. SJSU has mailed out 35 Teacher Resource Kits by request, and 100 students from eight schools have logged into the contest page. Students who have completed the contest have reported reducing their energy use by an average of 15 percent.

Providing Lesson Plans

SJSU hired a 6th grade teacher as a lesson plan advisor. The team created three sample lesson plans to complement the contest. The lesson plans are designed to enhance student knowledge in earth science, math, language, and computing. Lesson plans are tailored to different grade levels with varying levels of difficulty. All students are expected to engage with the online contest at home. The lesson plans for all grades following the same format:

- Lesson 1: Using the Kill-A-Watt® energy meter
- Lesson 2: A "web quest" explores the Green Ninja website
- Lesson 3: A home energy audit developed by the California Academy of Sciences (this lesson is longer and more in-depth than the other activities)

Each plan details the subjects, duration, required setting, and needed materials. Teachers receive a Kill-A-Watt® Demo Guide, Home Energy Activity sheets, a Contest Energy Form, and a Parental Consent Form. Students who successfully completed the online Smart Energy Contest can win individual prizes or prizes for their classroom. These include a tree planted in a student's name, LED lights, a Green Ninja T-shirt, a class pizza party, or a class visit to the San José Tech Museum of Innovation.

Challenges and Lessons Learned

The primary challenge faced by the project team was developing a contest that would be easy for teachers to adopt. SJSU staff found that there are very few windows in the school year when teachers could introduce a new element in their classroom. Taking time to understand how to best connect to teachers and adapt materials to suit their needs caused delays in finalizing the online contest. With those challenges overcome, the project team began rolling out the program in November 2012 to an initial group of 30 classrooms.

Discussions with participating students and teachers are informing further design changes that can better promote interest and adoption. The project team hopes classrooms will use the contest platform to launch discussion, share energy data, and inspire behavior change ideas. The project team also hopes the online contest will serve as a class portal where teachers can monitor student participation and better integrate student data into classroom activities.

Zero1: The Art and Technology Network
The Healthy Art Program

About Zero1: The Art and Technology Network and The Art Inspector

Zero1: The Art and Technology Network is a San José-based organization that examines the intersections of art and technology and promotes art that reflects those intersections, building on the uniquely creative cultures of Silicon Valley. Zero1 is working with some of the most fertile and creative minds from the worlds of art, science, design, architecture, and technology. The Art Inspector, a third party certification agent sponsored by Zero1, was founded in 2009 to expose and mitigate the environmental impacts of art. The Art Inspector works with artists, curators, collectors, and others to identify artists who use environmentally mindful practices.

CECG Focus: The Art Inspector developed and piloted a protocol to transform artists' practices through targeted education, audits, and new materials.

Website: artinspector.org

Campaign Accomplishments

- Conducted environmental assessments of five participating artists' studios and materials
- Educated participating artists about the environmental impact of their studios and practices, and introduced them to sustainable materials and energy efficient tools
- Educated the public about the environmental impact of art through an "eco-art" exhibit at San José City Hall
- Held an artist-focused lighting workshop in partnership with PG&E's Pacific Energy Center, attracting 39 attendees
- Used blogs, video logs ("vlogs"), and social media to create a trend of low-impact art, with 3,408 visitors to the Art Inspector website over the course of the campaign

The Healthy Art Program competitively selected five Santa Clara County artists for eco-makeovers. With extensive training in energy efficiency technologies and low-impact materials, the Art Inspector educated artists about lowering their carbon footprint and assessed the energy consumption, material use, and environmental impact of their work. The Art Inspector procured environmentally friendly materials to replace those that were toxic or inefficient, made basic studio modifications, and gave the artists tools to track their energy use.

The artists used the new tools and materials to create works that were displayed in an Energy Smart Exhibition. The art reflected the transformation of thought and practice experienced by the participants. The artists documented their experiences through blogs and vlogs.

An Unmet Need in an Underserved Community

Visual artists occupy a unique niche in the market and in popular culture. They exert tremendous social influence, yet often occupy a place on society's fringe. The results of their labors are meant to surprise and inspire the viewer, rather than to be directly "useful." At the same time, artists have historically influenced technology and set cultural precedents that shape society in ways that few other fields do. Like those in other industries, artists may require highly specialized tools and materials. Such specialization often leads to low supply; finding alternatives for a given medium or process can be difficult or impossible.

Fine artists are therefore challenged in identifying and sourcing environmentally friendly tools and materials for their work. Compounding this is the task of identifying ecologically harmful or unnecessarily inefficient practices in the first place. Artists are accustomed to working in suboptimal conditions, and many accept toxic materials and high utility bills as unavoidable occupational hazards.

Engaging the Community and Building Trust

The Healthy Art Program began by seeking artists willing to receive an energy audit, learn about conservation opportunities, and document their experiences using new practices. Each artist received a stipend of $1,000.

The five selected artists used their studios at least 25 hours a week. Typical of the small artist community, they worked in low-cost, old, and often dilapidated studios with leaky ceilings, old wiring, and poor insulation. Their workspaces were a single room studio, a converted apartment, a garage, a partially converted basement, and a former warehouse. Several used outdated, high-energy equipment, such as old crucibles, power tools, and generators. They were unaware of the implications of their energy use and lacked access to

sustainable fine art materials or manufacturers. Even where these artists wanted to move toward more sustainable practices, fears of losing their space or bringing attention to toxic materials prevented them from seeking information and resources.

An artist herself, the Art Inspector quickly earned the trust of the participants. She visited each artist to understand the kind of art they created and their material needs. She walked them through the process, conducted materials inventories, and made recommendations.

The first round of workspace assessments were conducted in September 2011, and the second in December 2011, after the artists had implemented the recommended upgrades and experienced new materials. The Art Inspector researched the artists' techniques, learned equipment standards, purchased materials, and customized assessment templates. She sourced materials including Forest Stewardship Council (FSC) certified plywood, high efficiency lighting, domestic organic fabrics, natural dyed beeswax, non-toxic adhesives, natural pigments, eco photo developers, 100-percent post-consumer photo paper, non-tree papers, and water soluble oils. Assessments included space efficiency, lighting, total and per-appliance energy usage, Volatile Organic Compound readings, materials intake, and ventilation.

The participating artists temporarily surrendered any art-making materials deemed unhealthy or inefficient, and instead used "eco" materials chosen by the Art Inspector as replacements. All received Kill-A-Watt® meters, smart power strips, and CFLs. They experimented with the low-impact materials, reaching beyond their comfort zones of familiar substances and brands. They created new art in the most efficient way possible, paying attention to electricity usage and lighting changes.

Transforming Practices and Creating Lower-Impact Art

The artists were excited about exploring new materials and techniques. One wrote in her blog, "The Art Inspector came to my studio recently to give me my new eco-friendly materials! This was a much anticipated day, and for me, the most intriguing part of the process. I was given a set of Grumbacher water soluble oil paints, powder pigments, linseed oil, Biosheild Citrus Thinner, and AFM Safecoat Base paint. For a surface, she provided locally milled wood and canvas." These products replaced turpentine, forest-grown wood, and a number of toxic paints and pigments.

After lengthy discussion with the Art Inspector on where she purchased her supplies, one artist realized that while she buys locally-grown food, she had never before considered locally-produced art supplies. Another, inspired by the program, organized an Art Supply Swap and hazardous supply drop-off event. This artist, Shannon Amidon, incorporates natural and collected materials into her work, from seed pods and insects to vintage books, and employs alternative process photography and other non-traditional techniques. She was heavily involved in assessing her own materials. She conducted research to create her own alternative paints and find non-toxic solvents, sustainable paper, and other goods.

Each artist documented her experience using the materials. While they were pleased overall, there were cases in which they found the new products inferior. For example, the FSC plywood was heavy, making it difficult for the artist to transport and hang. Another artist was happy with the new photo materials and adhesives—replacements for traditionally toxic items with few alternatives—but found the texture and clarity of other materials and pigments lacking. Lori Krein, a mixed media artist, found that her new paints needed to be mixed with a solution, and was disappointed to find the colors "limited and muting."

Energy efficiency was an area of significant interest as well as confusion. The Art Inspector recommended that Christine Canepa, whose varied practice includes installation and painting, replace a full wall of single pane windows to better insulate her warehouse. Unfortunately, the action was cost-prohibitive. After heavy involvement in materials' sourcing, Shannon Amidon measured her own energy use but was unsure of what to do besides change her bulbs. On the other hand, after learning how energy affects her practice, artist Therese May signed up for a full home audit with Energy Upgrade California and modified her studio. Lori Krein works in a complex of studios, and educated her landlord

about options for upgrading the building. The landlord is now considering modifications. Some artists replaced light fixtures and switched to less energy-intensive tools. All are now using "smart" power strips and Kill-A-Watt® meters.

An ambitious demonstration project, the Healthy Art Program went beyond transforming the practices of the participants. The Art Inspector provided a platform for the artists to blog and vlog about their experiences, which they did throughout the process. The project website includes project documentation and resources for sustainable art materials. The Art Inspector conducted two workshops on sustainable materials tailored for artist needs. An interactive public exhibition at San José City Hall displayed the artwork created with the new materials and tools. Finally, a 12-minute documentary, posted to the Healthy Art Program website, explains the project and shows the artists' transformation process.

Broadening the Influence

The project's creators hope that it will expand awareness of the need for high-quality, environmentally-friendly art materials. By broadcasting that need to the community at large, they hope that other artists will realize the potential to be more environmentally conscientious in their work. Finally, as the art community moves toward a higher degree of environmental awareness in their practices, they hope that the resulting art will reflect that sensibility.

Artist communities from around the world have used the heathy art website and blogs as resources, and the Huffington Post asked the Art Inspector to write an occasional piece about environmentally friendly art materials. The model is now being considered by other cities. San Francisco's Department of the Environment has expressed interest in helping their artist communities to work in healthier environments, and the City of Seattle has reached out to the Art Inspector about connecting to artists regarding health and safety.

In another effort to extend the project's impact, the Art Inspector teamed up with PG&E's Pacific Energy Center (PEC) to offer an artist workshop at the PEC Lighting Lab. Thirty-nine people attended the workshop, which addressed lighting needs for the visual arts. Students learned about energy-efficient techniques and equipment, the basics of LED controls, and how to use lighting to alter the colors of their artwork. The workshop exposed participants to high quality options, and inspired their practice with hands-on experience.

The lighting workshop raised awareness of the need for similar practical workshops for other niche industries. The PEC is now creating a help desk for lighting designers, creative industries, and small contractors.

Challenges and Lessons Learned

Most of the artists who participated in the Healthy Art Program were already interested in environmentally-friendly practices. Yet even they used toxic products, worked in energy-intensive spaces, and did not know where to find sustainable materials. Their enthusiasm in exploring the new materials shows that movement toward more sustainable practice is possible, but more education is needed.

The Art Inspector created the workspace assessment scopes and used auditing equipment borrowed from the PEC. Determining what to measure took considerable time. Energy auditing is highly technical, and learning to use the specialized equipment took valuable time. Hiring a professional energy auditor would have been beneficial.

The greatest challenge, however, reflected the project's very need: sourcing sustainable art materials. The majority of contacted sourcing agents failed to supply such options. Several of the new materials did not work well compared to the baselines. These issues demonstrated the inherent problem of supply in the creative industries. Moving toward sustainable art-making will require product innovation, increased supply, and informed sourcing agents.

Agenda

2012 Statewide Community Energy Champions Grant Summit

November 9, 2012 — San José, CA

8:30 AM	**Registration** Continental Breakfast	Rotunda
9:15 AM	**Summit Opening:** PJ Iyer Assistant Environmental Services Specialist, Silicon Valley Energy Watch	Council Chambers
	City of San José Welcome: Kerrie Romanow Director, Environmental Services Department, City of San José	
	Pacific Gas & Electric: Leif Christensen Manager, Government and Community Partnerships, PG&E	
	Keynote: Dr. Edward Vine Program Manager, CIEE Behavior and Energy Program; LBNL	
10:15 AM	**An Innovative Solution:** Shayna Hirshfield Program Coordinator, Silicon Valley Energy Watch	
11:00 AM	**Break**	
11:15 AM	**Panel Session 1:** Best Practices in Engaging Unique Communities	Council Chambers
12:15 PM	**Lunch and Exhibition**	Rotunda
1:45 PM	**Panel Session 2:** Best Practices in Administration, Communication and Sustaining Effective Partnerships	Council Chambers
2:35 PM	**Panel Session 3:** Best Practices in Growing Youth Ambassadors	
3:25 PM	**Break**	
3:40 PM	**Panel Session 4:** Best Practices in Integrating Energy Efficiency Measures with Behavior Programs	Council Chambers
4:30 PM	**The Road Ahead:** Shayna Hirshfield	
4:45 PM	**Adjourn**	

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