

**FINAL REPORT**

Energy Efficiency and Conservation Block Grant (EECBG)  
DOE Better Buildings Neighborhood Program

Award Number: DE-EE0003798

BBNP Name: Energy Smart Colorado

Project Title: Resort Communities Retrofit Program

Name of Project Director/Principal Investigator: Adam Palmer, Eagle County

Energy Smart Colorado

A program for residents of Eagle, Gunnison, and Pitkin Counties in Colorado

Implementation Partners and Staff:

Community Office for Resource Efficiency (CORE) for Pitkin County residents.

Staff Members: Mona Newton, Charlie Eckart, Marty Treadway, Sarah Gruen

Office for Resource Efficiency (ORE) for residents of Gunnison County.

Staff Members: Kristen Van Hoesen, Bart Laemmel, Murtaza Naqvi

Walking Mountains Science Center, for residents of Eagle County.

Staff Members: Kim Langmaid, John-Ryan Lockman

Eagle County Government:

Adam Palmer, Program Manager

John Gitchell, Program Administrator

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### **Executive Summary**

Energy Smart Colorado began as a partnership between Eagle, Pitkin and Gunnison Counties and their non-profit partners, working together to improve the comfort, health, safety, and energy efficiency of homes in the central mountain region of Colorado. The program supported an Energy Resource Center in each county to provide residents easy access to energy coaching, comprehensive energy assessments, referrals to qualified contractors, and financial assistance for energy improvements. From 2010 to 2013, the program completed 3,085 energy assessments and 2,099 energy retrofits.

Energy Smart Colorado is the first rural multi-jurisdictional consortium in the country to implement a comprehensive residential energy efficiency program. Development of the program was funded through a grant of \$4.9 million, awarded in 2010 by the U.S. Department of Energy's Better Buildings Program. Utility partners contributed \$166,600 to support Home Energy Assessments for their customers.

As primary grant recipient, Eagle County coordinated program activities, managed the budget, and reported results. Eagle County staff worked closely with local community education and outreach partner Eagle Valley Alliance for Sustainability (now Walking Mountains Science Center) to engage residents in the program. Sub-recipients Pitkin County and Gunnison County assigned local implementation of the program in their regions to their respective community efficiency organizations, Community Office for Resource Efficiency (CORE) in Pitkin County, and Office for Resource Efficiency (ORE) in Gunnison County.

Energy Smart Colorado set the goal to improve efficiency in 10% of the homes in our region by making home energy improvements simple and affordable for residents. Program staff opened Energy Resource Centers, developed a network of qualified contractors, a work-flow, an enrollment website, a loan program, and a data management system to track results.

**3 Year Program Results, January 2011 to January 2014:**

	Eagle County (15,148 homes)	Gunnison County (5,649 homes)	Pitkin County (6,807 homes)	Total, Combined (27,604 homes)
# of Home Energy Assessments	1065	1026	994	3,085
# of Home Energy Improvements (Retrofits)	783	396	920	2,099
\$ Total Investment (Assessment + Project Cost)	\$3,061,366	\$1,203,299	\$3,406,459	\$7,671,124
# Hours Worked by Contractors	10,406	5,538	12,295	28,239
# Health / Safety Threats Identified	73	70	46	189
Annual Energy Savings (kBtu)	18,959,896	4,768,232	22,518,585	46,246,713
Annual Energy Cost Savings	\$233,692	\$65,136	\$322,983	\$621,811
Annual CO2 Reduction (Metric Tons)	1,426	409	2,029	3,886

Through a Home Energy Assessment, residents learn about the safety and energy efficiency of their home. “Quick Fix” energy efficiency measures installed during the Assessment including efficient lighting, hot water pipe insulation, basic air sealing, low-flow shower heads, and programmable thermostats. Following the home visit, the Building Analyst provides a report to the resident detailing any health and safety concerns, and recommended energy efficiency improvements. Program staff (also certified to BPI standards) follows up with participants to offer advice and explain rebates and how to access the loan program.

The Home Energy Assessment is offered to residents at an affordable price to encourage and enable participation. The resident’s out-of-pocket cost for the service was initially \$50 and increased to \$100 in 2012. The low price has been effective for encouraging participation, and in some areas the resident cost is matched by local utility providers who see the value of the program in helping reach efficiency targets. The balance of the assessment costs, as well as staff, office, and program development costs were paid through the grant fund.

By making energy-efficiency services both affordable and easy to access, Energy Smart Colorado effectively “jump-started” the business of home energy improvements in our region. Prior to Energy Smart, an estimated 100 homes per year received energy efficiency services in our region. Since the program launched in 2011, local contractors have completed 3,085 Home Energy Assessments (audits) and 2,099 home improvement projects (retrofits), about a ten-fold increase in these activities annually as a result of the program. About 10% of residents received

a Home Energy Assessment and know what they need to do to improve their homes, and 8% of residents have already improved / retrofitted their homes through program assistance.

From an economic perspective, Energy Smart helped contractors re-train and get back to work during a major economic recession. The program supported owner investments in efficiency improvements, which continue to provide annual savings for owners and related economic benefits for the community. Over the three years of grant-funded activities, Energy Smart Colorado supported or induced over \$7M in private investment, resulting in over \$600K in annual energy savings. Contractors worked over 28,000 hours on energy assessments and retrofits, and program staff worked 51,479 hours to develop and implement the program for a total of 79,479 hours worked, or 12.73 full time equivalent jobs for the three-year grant funded period.

Many of the contractors who completed training and certifications through Energy Smart continue to work with the program today, while others received training through the program and moved on to other endeavors. In all cases, the Energy Smart training and experience has helped to develop the network and resource base for ongoing energy efficiency work in our community.

As anticipated, home efficiency improvements have improved the quality of local housing stock. Air-sealing, insulation, and heating system improvements have resulted in improved comfort of buildings, and substantial energy and related climate savings.

Unanticipated results include the identification of numerous construction defects, degradation of materials, and equipment failures resulting in health and safety issues in over 200 of participating homes. Issues found include moisture and mold, electric wiring problems, gas leaks, and actual (or potential for) unsafe levels of carbon monoxide in occupied living areas. This relatively high number of safety issues identifies the need for a more rigorous building inspection process including blower-door testing to identify large (and often hidden) air leaks, and Combustion Appliance Zone (CAZ) testing of mechanical systems to assure safe venting of combustion gasses in worst-case scenarios.

As of February 2014, approximately 10% of homes in the region have received a Home Energy Assessment through the program. Based on third party surveys, the program received a 94% customer satisfaction rating, and 72% of participants made energy improvements in their homes as a result of their Energy Smart Assessment. Potential for energy savings combined with the health and safety benefits indicates a need for ongoing expansion and increased participation in the program throughout our region.

With federal funding mostly expended, the program is transitioning toward a sustainable business model. Energy Smart Colorado is organizing as a 501c3 non-profit entity, governed by the non-profit organizations that co-developed and implemented the program in Eagle, Gunnison and Pitkin Counties. The managing Board of Directors will consist of the Executive Directors of the Walking Mountains Science Center in Eagle County, Office for Resource Efficiency (ORE) in Gunnison County, and Community Office for Resource Efficiency (CORE) in Pitkin County. Energy Smart Colorado will continue to offer a platform of energy efficiency services to governments, utility providers, contractors, and community organizations across Colorado.



During transition, the Energy Smart team continues to improve community access to information, qualified contractors, and financing for home energy improvements. The program now offers services and partnerships with neighboring Summit, Lake and Garfield Counties, and is engaging in service contracts with utility providers.

## **Final Technical Report**

### Institutional Design

The Energy Smart Colorado (ESC) team set out to develop the critical infrastructure and services necessary to help residents in our region improve the energy efficiency of their homes. A staffed Energy Resource Center in each county provides energy-efficiency outreach, education, and free advice.

Residents sign up for a comprehensive Home Energy Assessment where they learn first-hand from a BPI-certified contractor about the health, safety and efficiency of their home. Participants receive a detailed report outlining observations and recommendations for improvements.

Energy Resource Center staff follows up with residents to assist with Home Energy Improvements by providing easy access to rebates, incentives, and the Energy Smart Loan Program. Participant information and data from the Home Energy Assessment and Home Energy Improvements is collected along the way in a custom Salesforce Data Management System that enables easy tracking and reporting to partners.

### Business Model

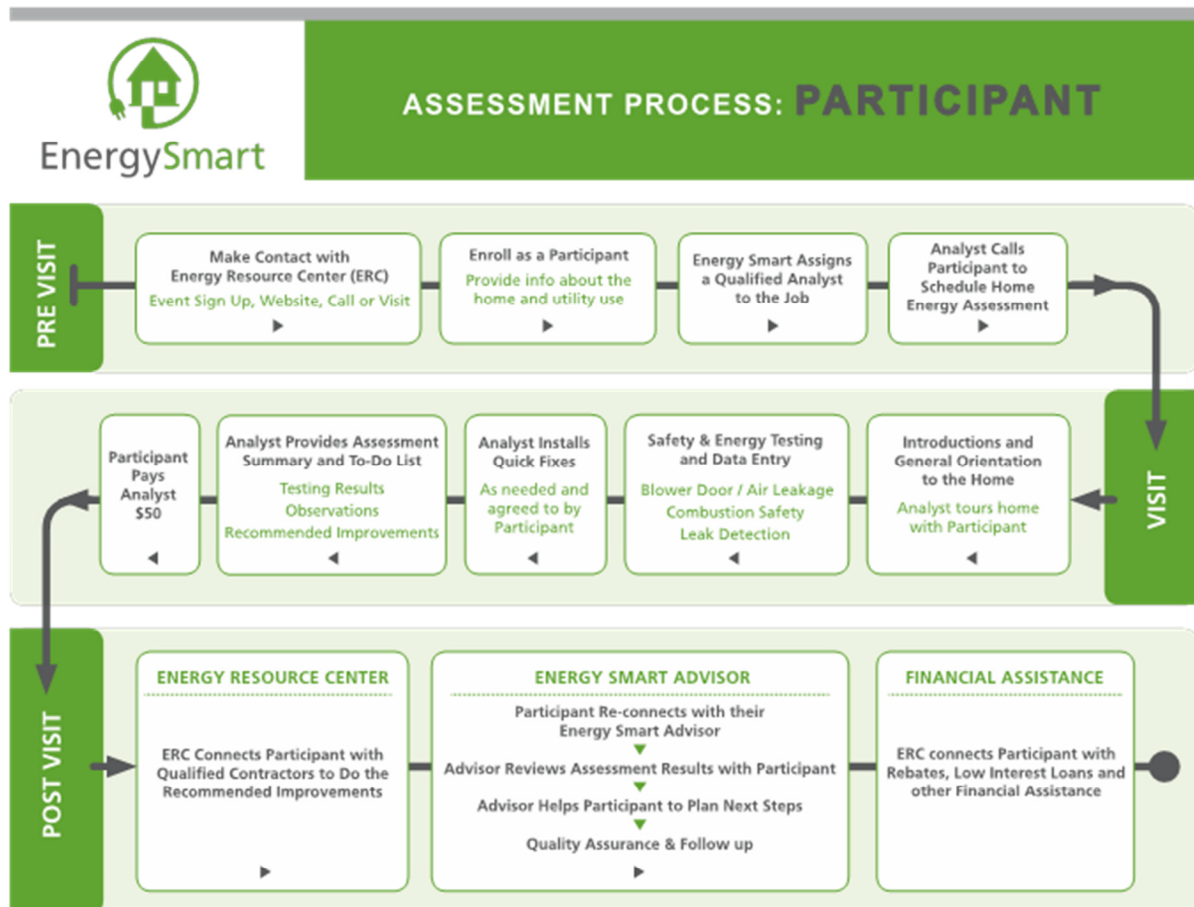
During the grant period 2010 through 2013, DOE grant funds were used to develop and deliver the Energy Smart Colorado program. Eagle County staff and non-profit partners CORE, ORE and Walking Mountain Science Center developed and implemented all the various components of the program, and overcame barriers as they arose. Primary focus areas were improving access to information, workforce, and financing. Program staff worked with four utility partners to increase the number of utility customers engaged in energy-efficiency improvements, and the utility partners contributed a “co-pay” or rebate for completed Home Energy Assessments. Utility co-pay has become an ongoing and critical financial support for the program, and helps to maintain an affordable price-point for participants.

In the post-grant period beginning January 2014, the grant partners are working together to form a new non-profit entity called Energy Smart Colorado. The new organization will offer a platform of energy efficiency services to governments, utility providers, contractors and community organizations across Colorado. Services include community education and outreach materials, energy assessment tools and advisory services, financing through the Energy Smart loan program, data management, and reporting.

### Program Design and Customer Experience

Community organizations share the Energy Smart Colorado brand, tools and resources to deliver energy efficiency services for their customers and community. Program guidelines, weekly team calls, and constant communications between member communities help guide continuous improvement.

Customer experience is based on building positive relationships between residents and the staff at the local Energy Resource Centers. Staff members are trained to the BPI standard for Building Analysts, and are always available for advice and support. From the first conversation, staff offers support that continues through enrollment, the Home Energy Assessment, follow up, and Home Energy Improvements.



*Customer Experience, work flow for program participants*

#### Marketing and Driving Demand

In 2010 the Energy Smart team hired Impact Marketing led by Mary Kenyon to develop an effective brand and marketing strategy. An iconic logo was designed, a strategic marketing plan was written, standardized marketing materials were designed, and in January of 2011 the teams in each county began to reach out to target markets.



*Table Event, Global Energy Forum Event, Eagle County February 2012*



*Saturday morning homeowner enrollment event, Home Depot, June 2013*



*Building Brand Awareness, Eagle County Bus Advertising, Summer 2013*

Single family homes and multi-family buildings were primary targets, and each county used what they believed to be the most effective methods for reaching residents in their community. Pitkin and Gunnison Counties focused on tabling opportunities and community events to drive new enrollments, while Eagle County relied more on newspaper and radio advertising. Enrollments were tracked through the program's shared database and communicated on team calls and meetings.

Some campaigns were targeted to specific neighborhoods, or to specific demographics, but most outreach efforts were aimed at community residents in general. Marketing efforts were driven by staff's experience, relationships within the community, and knowledge of events and opportunities as they arose.

#### Workforce & Contractor Relationships

Each Energy Resource Center developed a list of certified contractors, provided training to increase the number qualified contractors, and provided ongoing meetings and best practice workshops for contractors.

At time of start-up, a few energy efficiency contractors were offering energy audit services for local residents, but qualifications and certifications varied. Energy Smart staff hosted educational events and recruited contractors within the community to join our team. To support re-training, the program offered \$1,500 for staff and selected contractors to receive training and the BPI Building Analyst certification. Local education partner Colorado Mountain College organized the trainings in 2011, but discontinued in 2012 due to budget constraints.

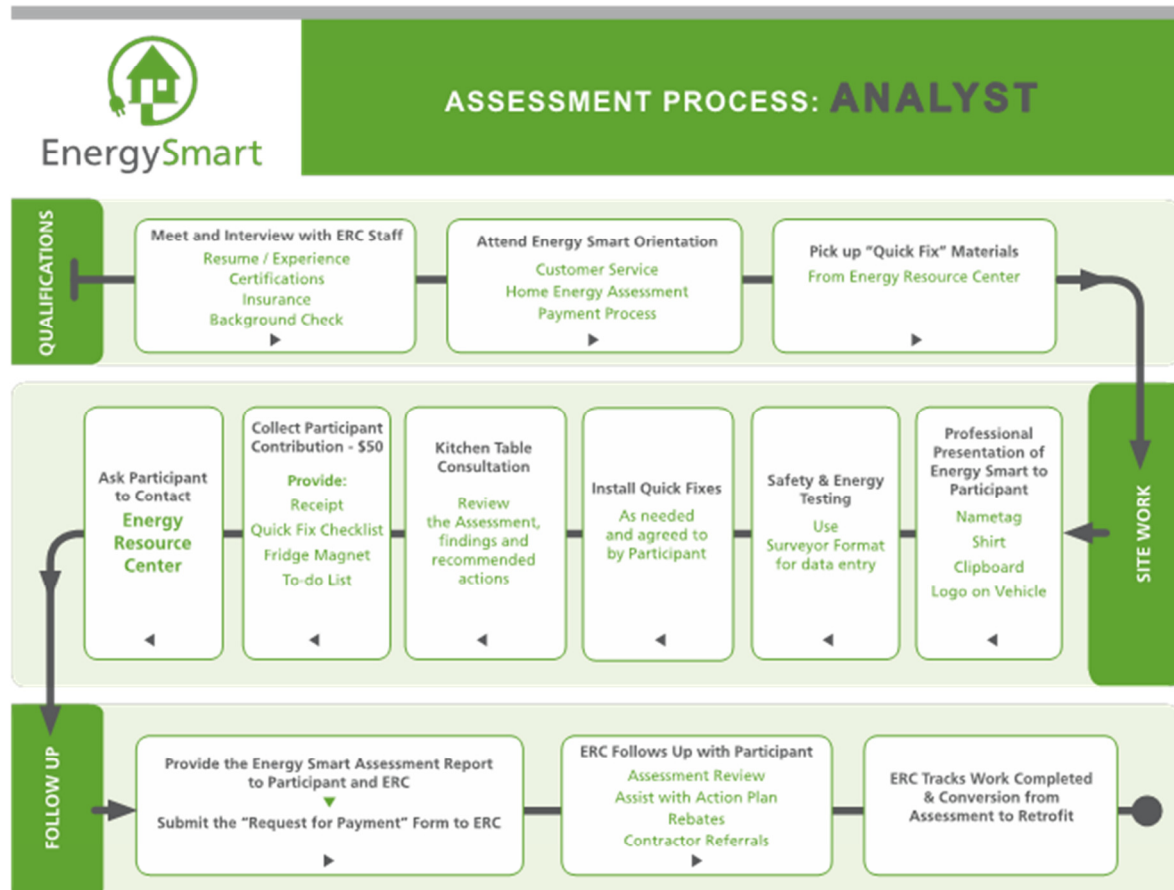
In March 2012 Energy Smart hired Jon Kinstad, a BPI-certified contractor, proctor, and educator. Through 2012, Jon provided training for new analysts joining the program, and supported program staff with building science and technical building recommendations. He also reviewed Home Energy Assessment reports to assure thorough and accurate data collection, accuracy of recommendations, alignment with BPI standards, and general quality of the report content and presentation. Our QA manager improved the overall effectiveness and performance of both Building Analysts and Retrofit Contractors working with the program. When Jon moved on to other pursuits, internal staff assumed the QA responsibilities for their Energy Resource Center.

Throughout the grant period, staff and contractors met to raise their level of knowledge and quality of service for program participants. Staff provided monthly contractor meetings to share program information and to encourage ideas and information exchange. Meeting topics included updates on BPI standards, technical discussions of performance testing (blower-door testing, Combustion Appliance Zone testing), energy code updates, strategies for reducing electric load in homes, and a wide range of other topics related to building science and residential energy efficiency. Several education seminars were provided for local contractors, including a workshop led by Larry Zarker, CEO of Building Performance Institute on the need for comprehensive Home Energy Assessments. Joe Lstiburek from the Building Science Corporation met with over 100 contractors on the topics of identifying and solving common residential building problems in our region.

The equipment to test the performance of homes is expensive and many of the contractors working with the program are relatively new to the work and have not yet invested in

equipment. To fill this gap, Energy Smart purchased two full sets of equipment for each Energy Resource Center for loaning out to contractors. The equipment loan program has been effective and continues as a lasting aspect of the program.

In 2011 staff developed work-flows to help Building Analysts provide consistent services:



### Financing and Incentives

A program goal was to develop a low-interest, easily accessible loan product that would provide incentive and support for homeowner investments in energy upgrades.

Program staff met first with local community banks, but the small loan amounts (\$2,500 to \$25,000) and relatively low volume of loans expected did not generate enough fees and incentives to make a local bank program viable. Staff reached out to Funding Partners for Housing Solutions, a community development financial institution (CDFI) in Fort Collins Colorado that was already administering the Eagle County Housing Department's down-payment assistance program. A deal was struck and a \$985,000 revolving loan fund was developed, available to all program participants. At time of writing, 25 loans have been made through the program with current loan portfolio of \$200,000. The Energy Smart loan program has since expanded, and Funding Partners now offers a similar program to other communities in Colorado including City of Fort Collins, Summit County, and Lake County.

As part of their conversation with the participant, contractors promote the loan program as a way to move projects forward. They offer financing and rebates as an “enabler”, but they focus primarily on the comfort, savings, etc. of the upgrade they are selling.

In addition to the Energy Smart loan program, staff assisted electric utility partner Holy Cross Energy in establishing on-bill financing. This program launched in January 2014 and provides simple on-bill repayment for eligible efficiency upgrades up to \$25,000 through a partnership with Bank of Colorado.

With these programs in place, on-going education and outreach is necessary to continue and grow participation. In the future, partnering with manufacturers and larger contractors' promotions will be necessary to leverage significant additional participation.

During the post-grant transition period, the program goal is to manage the use of the revolving loan fund most effectively to support operations. As the program matures and grows in service territory, there is an anticipated increase in loan activity and volume. However, at the same time, the program is at a more vulnerable state while it develops additional partnerships, funding, and business models that work.

To this end, planned is to leave the majority of the fund in place as is to support loans and energy improvements, but also draw down the fund up to 20% to support centralized operations and mini-grants (with some local matching \$) to new and/or struggling local partners to develop the program in their communities.

This would provide assistance to support central needs of the program, but also successfully expand into additional service territories when it's needed most.

As on-bill financing, PACE, or state-wide Loan Loss Reserve (LLR) programs are developed, the need for the Energy Smart RLF may diminish. If this becomes the case, the Energy Smart management will consider other options to best leverage this capital resource to meet the needs and goals of the collaborative program.

#### Data and Evaluation

The Energy Smart team, with initial help from several IT consultants, worked toward the general goal of consistent and seamless data collection, and staff measurement and verification for participating homes. Two consulting firms, Performance Systems Development, LLC and Snugg Home LLC assisted with those early efforts. Our consultants promised very sophisticated data management systems, but fell short on actual delivery.

By 2013, the program had discontinued our contracts with consultants, and began to design and build the data management system in-house. Our general strategy has been to use readily-available “off-the-shelf” software applications (Salesforce, Formstack, Drop Box, PDF Expert) to integrate online forms with our online database. The key component of this system is our Energy Smart Home Energy Assessment tool, a custom-designed PDF form template, which collects over 200 data points, places photos and IR images for a comprehensive, highly customized and professional-looking homeowner report. This template can be utilized online or

offline on an iPad, and assessment information is submitted to the database once back online. Payment and direct measure installation information are also collected on this form.

Data collection begins when a new participant visits the website. As part of the enrollment process, participants enter their contact, utility, and basic home data on a custom-built web form. Staff connects the new participant with a Building Analyst, who conducts an Assessment and enters home safety and energy efficiency data on an iPad. By submitting the form, the Analyst is also invoicing the Energy Smart program, sending a completed version of the PDF to Energy Smart staff, and sending the assessment data to the online database. This invoice process includes calculating any available utility partner payments toward the assessment and DI costs. After any finishing touches are made, the Analyst sends the completed report pages to the participant directly from the iPad. Staff uses the data collected to provide customer service, results reporting, and other energy efficiency data analysis to support our partners in the region.

The deemed savings from these direct installs is calculated on a per-measure basis inside Salesforce. We have intentionally written these formulas to report conservative estimates for energy savings, as we feel that over-promising results is a pervasive problem in the EE industry. Estimated carbon savings are also calculated, using utility-specific carbon factors that pull from the savings estimates.

Our rebate processing is handled in a similar fashion with online form integrations with our Salesforce database. We continue to use HESPro for modeling energy savings, but are investigating Optimiser integrations with our current workflow.

The result is a self-supported data management system that uses low-cost technologies to provide effective data and analytics for program staff and participants.

## **Energy Smart Colorado, Project Scope and Accomplishments**

**Access to Information:** The Program will establish one Energy Resource Center (ERC) in each county to promote the program and provide comprehensive participation assistance. The ERCs will help owners take advantage of energy audit incentives and available rebates, connect them with qualified contractors, provide feedback on potential improvements, provide available financing information, and follow up evaluation. Using a data management service, the energy use of participating homes will be tracked to calculate actual cost savings by house type, size, construction type and date, and specific retrofit measures and provide a comprehensive analysis of the program's results.

Accomplishments by Year:

### **2010**

The grant was awarded in August of 2010, and the program managers from the three counties worked together on an implementation plan to:

- Open Energy Resource Centers (ERC) in Eagle, Gunnison and Pitkin counties. The ERCs were to offer advice, assistance and resources to help residents through a process to improve the energy efficiency of their homes.
- Develop guidelines to assist with workflow, customer processes, administration, and quality assurance.
- Hire a marketing contractor (Impact Marketing) to develop a consistent brand and community message, and support staff and contractors with marketing support.
- Select a contractor to implement an information management system to track and report data from participant enrollments, assessments and home improvement projects.
- Engage interested contractors to hear ideas about current needs, pricing and logistics for the new program.
- Complete 300 home assessments and improvements in each county in 2011 (900 total).

## **2011**

During the first year of operations, the main focus was to make the new program known in the community, and to enroll as many new participants in the program as possible. Staff opened offices, presented the program to local governments and organizations, set up Energy Smart tents and tables at community events, and met with neighborhood HOAs.

- Energy Resource Centers (ERCs) opened in January 2011 and staff positions were filled in each county including a Program Manager, a Home Energy Advisor, and an Outreach / Communications person. Marketing contractor completed rack cards, and branding collateral for public outreach and events. Forms were completed to support participant enrollments and contractor workflow. The first advertisements and articles appeared in local media.
- Team held weekly Monday morning calls to drive continuous improvement in the program – these calls continue today. Team shares access to all program files and documents via [www.dropbox.com](http://www.dropbox.com).
- Several pilot audits were performed in Q1 2011 to inform our workflow and administrative process. Staff recorded participant information and assessment data on spreadsheets provided by DOE.



- The marketing contractor launched our first web site [www.EnergySmartColorado.com](http://www.EnergySmartColorado.com) which provided detail of program offerings. Each county implemented marketing strategies specific to their community including press releases and other communications, social media, partner events, enrollment events, and targeted outreach to neighborhoods.
  - Eagle team advertised to a broad audience, not a specific segment or target. The team hosted the annual Home and Garden Show, and tabled at local events including the popular Teva Mountain Games and at a summer outdoor concert series.
  - Pitkin focused on the Home Owners Associations (HOAs) as an enrollment strategy: Hosted enrollment events at annual HOA parties (8+ events). Pitkin developed an HOA invitation advertisement, ran a contractor recruitment ad, and created the “Energy Bar” concept to help promote the Energy Smart program. Pitkin’s ERC hosted a public information workshop led by the Bank of Colorado called “Financial Options for Homeowners”.
  - Gunnison advertisements targeted contractor recruitment and the second-home market. Innovative monthly events included “Caulk-Us Parties” where homeowners shared the results of their Home Energy Improvements with their friends and neighbors. “Power Hour” events combined home energy education with social events. And, the team connected with general community by tabling at annual events including the Sage Grouse Festival, and the Hospital Wellness Fair.
- Program Marketing Collateral was developed to raise program awareness:
  - Postcard Magnet piece for the kitchen table discussion
    - Pocket Guide to Energy Efficiency for Pitkin and Gunnison
    - Display boards were developed for special events.
    - Yard signs were developed to raise awareness of program activities - “Energy Smart Home Assessment In Progress”
    - For contractors, logo’d truck magnets for vehicles, name tags, logo hats, polo work shirts, and drink holder “koozies”.
- In Q3 marketing staff focused on promoting rebate incentives for fall retrofit work. We also began working with audit contractors, utility partners, multi-family HOAs and property managers to create a Multi-Family guideline, outlining a workflow to assist the multi-family properties in our region with energy efficiency improvements.

- Marketing staff launched a “Fall Season Pass” and “Winter Rebate” campaign that included print, radio and in-bus ads, and compiled a 2011 Annual Report to document Energy Smart Colorado’s events, activities, collateral and media over the first year of the program. ERC staff discussed the program with local real estate professionals to promote the Home Energy Assessment as an option to help buyers make thoughtful improvements to their new home. (note: the effort to connect with the real estate community did not get traction.)
- Staff worked to provide customer follow up, and developed rebate strategies help residents complete home energy improvements.
- Program managers negotiated terms with data management consultants Performance Systems Development (PSD). When contractors failed to deliver a Data Management System (DSM) our team issued a termination letter, and began a process to find a new service provider. At end of 2011 we were still using paper reports, and multiple spreadsheets for data collection. The lack of a data management system became a critical issue for staff, and began to impair the success of our program. By the end of 2011, staff had selected Snugg Home to provide DSM services.

## 2012

- A contract with Snugg Home LLC was signed in January 2012 for implementation of a data management system. The Snugg platform helped to integrate our website ([www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)) with field audit tools and project data management for improving customer service and results tracking and reporting.
- Marketing staff delivered a 2011 Annual Report to document Energy Smart Colorado’s events, activities, collateral and media over the first year of the program, and developed a Quarterly Update to provide ongoing program information to program partners and participants.
- Energy Smart helped to sponsor the Vail Global Energy Forum, which brought together energy industry leaders and keynote presenters including Colorado Governor John Hickenlooper and former U.S. Secretary of State George P. Schultz. Over a 2-day conference on March 3-4, presenters discussed U.S. energy opportunities including a session titled “Energy Efficiency: The Unpicked Low Hanging Fruit”. The Energy Smart team tabled at the event, and supported the broadcasting of the event on local TV.
- Our spring marketing campaign offered half-price Home Energy Assessments through events, posters and advertisements, resulting in over 100 new enrollments. Marketing supported co-branding initiatives with contractors. Each county’s resource center

sponsored and tabled at local events including Eagle Home Expo, Teva Mountain Games, Outdoor Expo, Dandelion Days, the Gunnison River Festival and Farmers Markets. Marketing developed and distributed a quarterly report that includes program initiatives, results, and case studies.

- Marketing work sessions were conducted in Eagle and Gunnison counties to help prepare for the active summer months and review plans for events, activities and outreach. A whole-team work session was conducted in June including marketing review and planning.
- Earth Day marketing materials were created with the headlines "Get Your Green On" and "Get a Check Up" were distributed via print, radio and posters. Gift certificates, coupons and billing inserts were created and distributed through several channels. A postcard was created to target multi-family property managers and HOAs. Branded letter templates were also produced for mailings and email correspondence. Reusable grocery bags were produced featuring the Energy Smart brand and call-to-action information.
- Energy Smart Colorado began outreach to Homeowners Associations, Property Owners Associations and property management companies to help educate members and/or clients about Energy Smart and opportunities for multi-family buildings. Outreach tactics include presenting at annual meetings and annual mailing inserts.
- ERCs tabled at events for Earth Day, such as the Gunnison Gardening Show, the Eagle Home Show, and spread the message through a Pitkin newspaper campaign.
- Energy Smart Colorado's quarterly update was distributed to program stakeholders. Content included number of assessments, retrofits completed, website traffic, recognition of utility partners, samples of marketing collateral, and case studies.
- A new, enhanced Energy Smart Colorado website was also launched in Q2 connecting homeowners easily to the Snugg Homes' Dashboard and Funding Partners' applications for the loan product.
- In Q3, the marketing contractor left the program and the ERCs shifted toward a decentralized marketing approach. Each partner county began working directly with their creative agency and local media contacts for advertising and placement. Creative materials continued to be shared within the program.
- Gunnison implemented a call-center initiative to assist participants. Nearly 400 calls were made out of a pool of 508 existing participants. Scripts, calling protocols, and

informational follow-up email templates are companion pieces to this effort. 34 of those calls were made to sign-ups who had never scheduled or received home energy assessments. The remainder was participants who had home energy assessments through the program but had never submitted a rebate application. The majority of calls are met with appreciation and constructive questions about moving forward.

- In Q3, Gunnison County reached out to Homeowners' and Property Owners' Associations and Property Management Companies to connect through presentations at annual meetings and annual mailing inserts, resulting in sign-ups and multi-family leads. Gunnison also coordinated a Facebook social media campaign to share program information with participants and community. Team members in all counties tabled at events, and presented to town boards and county commissioners to increase awareness and drive new enrollments.
- Pitkin County staff developed a system using off-the-shelf software products for transfer of audit data from iPad field entry tablets to our Salesforce database. By end of 2012, our team transitioned away from vendor support for database services toward in-house management. This change reduced our dependence on contractors, and reduced operating expenses, and helped to streamline our data reporting processes.
- After much debate, our team decided to raise the co-pay cost for participants from \$50 to \$100, effective January 1, 2013. This increase tested whether participants in our region are willing to pay a higher price for energy services after the grant period. The change also reduced the program's cost of energy assessments, and increased the amount of funding available for incentives.
- In Q4 Energy Smart retained Customer Connections, Inc. to deliver customer satisfaction surveys to 310 randomly selected participants. From the report, we learned that reducing costs was the primary motivation for participation, followed by reducing environmental impacts. Most respondents (57%) rated the quality of their Energy Smart Assessment as "excellent", and 56% rated the contractor who performed their assessment "excellent". Respondents felt that "finding air leakages and areas of heat loss", and "gaining a better understanding of the home and its systems" were the most useful outcomes of the service. The majority of the respondents (60%) decided to make home improvements following the assessment, indicating a higher conversion rate than expected based upon rebates issued.
- By end of 2012 the Energy Smart brand was effectively growing in awareness and interest on the Western Slope of Colorado and statewide. Marketing, advertising, and awareness activities continued to expand, including several participant and contractor case study advertisements, and a "faces" advertising campaign highlighting the key

contractors engaged in the program. Gunnison and Pitkin Counties held tabling events at farmers markets, festivals, grocery and hardware stores, post offices, and homeowner education events. Marketing staff added online banner ads to our news media marketing portfolio, at Aspen Daily News, Aspen Times, Vail Daily, Snowmass Sun, and Crested Butte News.

- Marketing staff improved the Energy Smart Facebook page through ads, frequent postings, and special offers, including an online application in October for \$100 additional rebate vouchers. Advertising continued in local print media, radio, transit busses, and direct mail postcards, which were sent to 3,000 households in Gunnison County.
- Energy Smart sent public service announcements to program participants about winter heating tips, combustion safety, and carbon monoxide risk reduction. As a quality assurance service, staff followed up with participants with combustion safety concerns identified during their home energy assessment.
- For the holiday season, program staff emailed Energy Smart holiday greeting cards to partners and participants and provided one Home Holiday Upgrade to a resident in need in each county. The Home Holiday Upgrade consisted of a \$2,500 rebate and pro bono labor from the Energy Smart staff and contractors to each homeowner to support deep energy retrofits.
- To help inform post-grant planning, program managers sent informational letters to interested Colorado communities outside of the grant boundary, including Lake, Adams, Dolores, Montezuma, La Plata and San Juan Counties.

## **2013**

In February the Energy Smart team completed a Program Report outlining services and results of the program to date, posted at [www.EnergySmartColorado.com](http://www.EnergySmartColorado.com), and sent to local partners and state governments. In addition to ongoing radio and newspaper advertising, the Energy Smart team worked on projects to reach different segments of residents with informative, fun and interesting messages.

- A partnership message with Protect Our Winters (POW) was promoted in Q1 to help residents understand the connection between energy efficiency and climate change.

The Eagle team filmed the “Sabotage” Energy Smart promotional video.

We worked with local ski and snowboard manufacturers to provide Energy Smart branded products for use in displays and as contest prizes. The tri-county team also launched a friendly competition called the “Energy Smart Challenge” to see which county could enroll the most participants in March and April.

- Gunnison team continued to improve the Facebook presence of the program, and sent targeted emails to Energy Smart participants about rebates, the Home Holiday Upgrade Project and MLK weatherization day. Eagle launched an awareness campaign at Miller Ranch, a large affordable housing neighborhood. Community events, contractor outreach and word-of-mouth continued to be the greatest drivers of demand for the program.
- To safeguard the health and safety for program participants, each county's Energy Resource Center contacted residents when audits identified health and safety risks related to gas leaks and/or potential for carbon monoxide problems. Pitkin team used database queries to ID specific housing and heating types, and did outreach to all-electric (high heating cost) participants to alert them of available incentives.
- All 3 counties completed the review and clean-up of all previous quarters of audit and retrofit data. Pitkin team provided utility partner Holy Cross Energy with data for participants in their service territory.
- In preparation for post-grant operations, program managers held meetings with their county commissioners, utility partners and municipal governments to provide program updates and request ongoing funding for program operations. Gunnison team compiled a media toolkit and initiated conversations with potential new partner communities.
- In Q2 the Energy Smart team ran a summer communications campaign, tabled at events, and advertised via radio and newspaper to drive new enrollments. Pitkin team began a weekly promotion with their local Ace Hardware retail store to provide free advice to homeowners, enroll new participants, and connect residents with qualified contractors. New participants were given a coupon for reduced prices on energy efficiency products in the store.
- Program managers met with utility and local government partners to secure agreements for post-grant funding.
- All 3 counties worked to improve their customer services and follow up, with customer satisfaction surveys showing a positive result. Eagle County launched a pilot effort with Boulder-based Populus LLC to start a central call center for the program.
- Eagle County launched a new designation "Energy Smart Home", recognizing homes that have completed both an energy audit and home energy improvement. The designation is intended to raise awareness of energy efficiency of the home during the point of sale / purchase, and provide an incentive for program participants. Energy Smart Homes are designated by an icon in the assessor's database, and participants are awarded a medallion for display at the home. The designation helps to raise awareness

of energy efficiency of the home during the point of sale / purchase, and provides an extra incentive and motivation for program participants.

- The team discussed the option of forming a new non-profit organization called Energy Smart Colorado. The organization would maintain program assets, engage program partners in continuous improvement, and secure funds for local offices through negotiated agreements with utilities and fundraising through local governments and organizations.
- Each of the 3 county teams worked to secure funding for ongoing operations. Both Eagle and Pitkin offices secured funding from county governments to support staff, audits, and rebate incentives through 2014, and Pitkin through 2015. Gunnison team did not secure program funding for 2014.
- The tri-county team also worked together on utility proposals to provide services to utility customers in all three counties.
- In Q2 the Energy Smart teams in Pitkin and Eagle began working directly for Holy Cross Energy on a collaborative effort, to provide energy coaching to small to medium sized businesses. The goal for the pilot is to achieve 400,000 kWh savings, measured through rebate calculations, by end of year 2013. So far so good – the utility is paying Energy Smart staffers at both offices by the hour for coaching and business outreach and assistance.
- Eagle County Government began to offer Home Energy Assessments at a reduced price as an employee benefit – a possibility that is being presented to other large employers in the valley.
- Pitkin team led a revision of the programs’ audit report, which improved the look, content and practical use for homeowners.
- The team continued discussions and planning for the new non-profit organization. New member organizations from Summit County and Lake County joined the weekly team calls with the intention to adopt the Energy Smart program in 2014.
- CORE / Pitkin team led and negotiated terms for utility service agreements, which will provide funding for assessments and advisory services in the three partner counties and potentially for communities throughout the state.
- In Q4 the Energy Smart team in Pitkin and Eagle continued to work directly with local electric cooperative Holy Cross Energy to provide energy coaching to small and medium-

sized businesses. The team is compiling and packaging an Energy Smart assessment service for commercial buildings.

- In fall 2013, the Eagle Energy Resource Center moved to the Walking Mountains Natural Science Center, a LEED Platinum campus where residents visit and attend events to learn about the local environment. The new location for Energy Smart makes energy efficiency much more available and accessible for residents of Eagle County.

**Access to Financing:** The Program provides homeowners with four different financing options: Rebates for energy audits and efficiency improvements, including no-cost “quick fix” kits, an on-bill pay revolving loan fund for improvements up to \$3,000, Program Acquisition Cost Estimate PACE-style financing through each County’s Energy Smart Program for improvements of \$3,000 to \$30,000 and, Energy Performance Contracts for selected affordable housing rental properties and free-market multi-family condominium complexes.

### **Accomplishments by Year**

#### **2010**

- Program managers discussed options with DOE technical assistance, and with a local financial institution to develop a new loan program utilizing grant funds for a Loan Loss Reserve Fund.

#### **2011**

- Program staff developed incentives for participants including a low cost, high quality assessment product that includes quick-fix measures and access to rebates through the Energy Resource Center. Participant price for the service was \$50, with remainder of the expense covered through DOE grant funds.
- Ongoing meetings with utility partners helped to align the program with utility energy-efficiency goals. Team negotiated terms and started to invoice two of our utility partners for completed audit co-pays to leverage grant funds.
- Staff discussed terms for a low-interest loan program with interested Financial Institutions. We met with interested banks, and with a DOE recommended financial consultant Harcourt, Brown and Carey, but were unable to negotiate a Loan Loss Reserve (LLR) program. We began working to develop a less complicated Revolving Loan Fund through a Community Development Financial Institution (CDFI). A draft MOU between the three counties was forwarded to county staff for presentation and Board of County Commissioner approval.



- Program staff identified several existing loan programs through local and national banks that provide good terms. Energy Smart also identified an on-bill financing option through one of the major utilities in our region (SourceGas), and began to promote a similar structure with another local utility (Holy Cross Energy).
- In Q3 2011 we offered and promoted a rebate of 40% of project cost up to \$400 per home for retrofits that met the program standard - 15% total energy reduction as modeled through HES-Pro online software. The concept was relatively easy to explain, was an effective incentive, and became a general model for our rebate offers.

## 2012

- In Q1, our team revised our rebate offer to align with our program retrofit goal. Moving forward, our rebate provided up to 50% of project cost, capped at \$500 per single-family home, for achieving 15% modeled energy savings. (Multifamily offer was 20% of project cost, capped at \$400 per unit, not to exceed \$25,000 per neighborhood / entity.)
- Program manager worked closely with consultant Harcourt, Brown and Carey and Eagle County attorneys to draft an agreement for a revolving loan fund, to be administered by Founding Partners, a Colorado CDFI. MOUs were signed by all 3 counties approving the shared fund for loan capital. A draft agreement was signed by the Eagle County Board of County Commissioners on May 15, followed by a fund transfer to Founding Partners, a marketing campaign, and launch of the loan program for program participants in the 3 counties.
- Energy Smart Colorado announced its Energy Smart “Home Efficiency Loan” and conducted training for contractors. Supporting collateral for homeowners was also created and sent to the legal department for approval.
- “Rebates At-A-Glance” reference guides were printed and posted to the website for homeowner access to information on available rebates.
- Working with finance partner Funding Partners for Housing Solutions, Inc., staff initiated loans in all 3 partner counties, and closed 3 loans in Q3. Informational rack cards were developed to share loan program information with interested homeowners and contractors.
- In Q3 the Energy Smart rebate offer proved to be a strong incentive. Single family homeowners were rebated 50% of project cost up to \$500 for approved / prescribed packages, including air-sealing, insulation, windows, and heating system replacements.
- Activity through Energy Smart’s revolving loan fund continued to grow. In Q4, staff amended guidelines to include multi-family buildings, and renewable energy

photovoltaic systems, provided efficiency improvements have already been addressed. The program closed 5 new loans in Q4.

## 2013

- Energy Smart continued to promote the loan as a financing option for homeowners. 5 Energy Smart loans were completed in Q1 for a total of \$51,435, with average loan of \$10,287. Eagle and Pitkin teams supported progress toward on-bill financing through utility partner Holy Cross Energy, with launch anticipated this year. Pitkin team completed a QECB application to provide financing on boiler replacement and solar thermal installations on 13 buildings.
- In Q2, the three partner counties (Eagle, Pitkin, Gunnison) agreed to allow neighboring Lake County residents to access the Energy Smart revolving loan fund, not to exceed \$50,000.
- Energy Smart requested a no-cost extension of the grant fund from DOE, which allowed limited funding for the program through 2013. The team worked to secure funding from local governments and utility partners for operation of the program in 2014 and beyond.
- In Q4, two of the three counties successfully transitioned from federal grant funding to community funding for their local Energy Smart offices and programs. Eagle County Government and Pitkin County Government both agreed to fund their local Energy Resource Centers and incentive programs through general funds set aside for community energy efficiency and renewable energy projects. Gunnison County was unable to secure local funding for their Energy Resource Center, but continues to explore options to keep the program up and running.
- By Q4 2013, total closed amount = \$221,270.83. Portfolio balance of total current loans = \$195,503.96, with \$789,496.04 available for lending.
- In Q4 Lake County completed an agreement with Eagle County Government allowing residents of Lake County to access the Energy Smart revolving loan fund, not to exceed \$50,000.
- Holy Cross Energy launched a low-interest, on-bill financing program. Source Gas continues to offer on-bill financing for heating system upgrades.

**Access to Skilled Workforce:** The Program will provide contractor workshops and tuition assistance for both retooling traditional blue-collar construction trades, as well as emerging green-collar technical trades. Also, home diagnostic kits and equipment will be made available to local contractors/homeowners.

## **2010**

- Energy Smart staff worked with a local community college (Colorado Mountain College) to provide “BPI Building Analyst” training for new staff members and contractors interested in providing home energy assessments through the program. Energy Smart offered selected contractors \$1,500 as education incentive.

## **2011**

- Staff developed a list of qualified analysts and interested contractors, and began to engage analyst contractors in development of program workforce standards, assessment and customer service standards, program deliverables, pricing, and analyst payment process.
- Provided BPI Building Analyst Training to interested contractors, supported through tuition assistance.
- Purchased diagnostic equipment for shared use by ERC staff and analysts including blower-doors and manometers, gas leak detectors, and CAZ testing equipment.
- Team initiated discussions with partner organizations including governments, utilities, Building Performance Institute, and others.
- Sales Training was provided for contractor partners that included workflow and expectations for Home Energy Assessments, and ways to work with participants to encourage retrofits.
- Impact Marketing held quarterly meetings with staff to keep a focus on strategy and planning.
- ERCs continued to refine their list of contractors for participant referrals, and provided ongoing best practices workshops for contractors. Training events included Energy Code trainings in Eagle, Electric Load Reduction training in Eagle and Pitkin with utility partner Holy Cross Energy, and Building Science trainings in Gunnison. The ERC’s initiated processes for customer service and follow-up calls to Energy Smart participants to encourage and support retrofits.
- Energy Resource Centers began recruited service contractors who could offer a home energy assessment along with retrofit services.
- Training events and contractor information sharing meetings continue in all 3 counties, with the goal to improve the skills and ability to deliver quality EE services to

participants. Energy Smart has been able to partner with Colorado Mountain College to offer BPI, LEED, and other technical courses (e.g. air sealing and insulation course) which are free of charge to participants through an additional partnership with Colorado State Workforce.

- The team hired a quality assurance and BPI trainer Jon Kinstad to assist analysts and contractors with delivery of high quality services. The QA manager assisted the Energy Resource Centers with monthly round-table discussions, technical trainings, and one-on-one field training as requested for new analysts, and helped contractors develop and expand their business models to include energy efficiency services. Buick Energy Solutions in Eagle County invested in new equipment and grew their air-sealing and insulation business from 1 employee to 4.

## **2012**

- QA Manager Jon Kinstad reviewed audit reports with contractors in each county to assist and support the quality of their work, and to verify energy savings. Analyst credentials were documented, and BPI Building Analyst curriculum was developed for use in contractor training.
- Another member of the Energy Smart team became certified as a BPI tester and proctor, further empowering the program to provide training to the workforce.
- In Q4, Eagle County initiated a partnership with Skyline Mechanical, a respected local HVAC contractor now offering Energy Smart assessment services to 800+ preferred clients.
- Energy Smart offered its first BPI training with a class of 3 participants attending in Gunnison from October 29 to November 2. Gunnison also offered Combustion Appliance Zone (CAZ) Training (Oct 5th, 8 people), and Building Science 101 Training (Oct 16th, 6 people). Eagle provided CAZ training to contractors on Nov. 15. All 3 counties delivered ASHRAE ventilation training to interested contractors and building officials, and all counties continue to provide support for contractors interested or newly joining Energy Smart. Pitkin organized a successful networking and tabling event that provided homeowner education, and connected contractors with interested homeowners.
- An Unsafe Conditions Report template was offered to contractors to elevate homeowner awareness and response when gas leaks or combustion safety issues are discovered during a home energy assessment. To support the community interest in radon testing and remediation services in our region, Energy Smart continued to offer free radon test kits to Eagle and Pitkin participants (provided through municipal and

county governments) and began offering radon training support (\$500) for BPI certified analysts working with the program.

## **2013**

- Each county continued to support the work of contractor partners, and assisted new analysts and contractors joining the program. The team attended the ACI Home Performance conference in Denver, brought in consultant Jay Gentry to provide a custom sales training for contractors working with the program, and began testing and QA of a more consumer-friendly audit report for participants.
- Ongoing contractor meetings and training was provided including an Eagle County workshop on building science, common winter problems (ice dams, moisture, heat loss) and ways to correct. Responding to contractor requests, the team began developing a new, more consumer friendly Home Energy Assessment Report. Pitkin County team hired a qualified contractor to the staff position of Building Science Coordinator.

## **Challenges**

1) Data Management: During program start-up in 2010 and 2011, data management was our greatest challenge. Enrollment information, data from home energy assessments, and retrofit specifics were all tracked using Excel worksheets. Our team hired a contractor in May 2011 to provide these services, but contract deliverables were not met to our satisfaction and the agreement was terminated within a few months. We began anew and hired Snugg Homes LLC who helped to connect our website and Salesforce data management system in 2012. Due to shortcomings and functionality issues of the Snugg dashboard, Energy Smart staff began to adapt and develop our own report format and other data management components in 2013, and no longer required outside support.

2) Process hurdles (bureaucracy) in local governments: While there were many leveraged resources and in-kind services from local government partners, the fact that the consortium involved multiple governmental, not-for-profit, and private sector partners created process challenges. In particular, getting agreements and memorandums of understanding completed and through three separate county government processes created significant time delay which was a challenge to adapt to changed conditions or needs of the program. For example, approval of an MOU to extend up to \$50,000 for loans to residents of Lake County took 9 months.

3) Lack of interested and qualified contractors -- The general market for home energy retrofits is relatively small, and homeowners are not inclined to pay a lot for energy retrofits, which makes these jobs both tough to find and lower paying than comparable contractor work. Retrofit work is generally in attic spaces and crawl-spaces and can be dirty and hazardous. Result is that few contractors see an advantage or have shown sustained interested in doing the

retrofit work outlined in our Home Energy Assessments. While subcontractor trades exist for insulation, windows, mechanical improvements, our program continued to be in need of a quality home performance contractor who can review and complete recommendations from a BPI home assessment.

4) Forming Partnerships with Utility Providers -- While the program has been successful in generating partnerships with utilities for serves during and post-grant, in hindsight it would have been helpful in engaging utilities further up front and even prior to submitting the original Energy Smart DOE grant application. Our failure to fully engage utilities up front created a bit of an “us vs. them” approach, where utilities are only partially bought in to the program and retain similar or redundant in-house services. As we move forward, the benefits of partnership continue to break down these barriers and develop trust to share data and information, as well as fully engage the program as an effective way to meet DSM goals.

5) Uptake of financing – While Energy Smart loans continue to close and over \$200,000 has been expended from the revolving loan fund (RLF), uptake continues to be slower than originally expected. Marketing the RLF has been a challenge as well, since it’s difficult to market going in to debt by itself. Rather, we’ve taken a lesson from automobile ads: focus on the shiny new car and use low interest financing as an enabler to acquire it. Still, most participants in the loan program are from contractors who are aware and promoting the loan option as part of their bids in addition to word-of-mouth.

6) Creating sense of urgency -- To get participants to take action we’ve learned it’s important to create a sense of urgency. A good way to do that is through time-sensitive campaigns. While we were able to be effective later on the program with promotional campaigns, we tried to do too much of it early on before contractors or the public knew of the program or normal pricing to begin with. So rather than spurring action, the incentive changes simply caused confusion.

### **Program Sustainability Plans**

Energy Smart Colorado will continue to provide a platform of energy efficiency program services to Utilities and Communities including easy access to information (central website, library of marketing materials), a network of qualified EE professionals, an Energy Resource Center for residents and businesses to connect with incentives, rebates and loans, and results tracking and reporting services.

With Energy Smart services now offered outside of the three DOE grant partner counties, the team is forming a non-profit organization that can provide these services outside the auspices of Eagle County Government. The Community Office for Resource Efficiency (CORE) team in Pitkin County is acting as interim contract agent, representing Energy Smart Colorado partners in 2014 gas utility contracts.

The team is currently discussion program goals as part of the business plan for the post-grant period.

Eagle County staff is transferring program administrative responsibilities to the non-profit partners including payments to contractors, utility invoicing, and quality assurance reviews of home energy audit reports. Staff continues to report to DOE on program activities, and continues to oversee shared program assets including the revolving loan fund.

**Tasks Ahead:**

- Non-profit partners, with support as necessary from Eagle County staff, will develop Energy Smart Colorado as an entity. Energy Smart Colorado board members will represent the partner organizations (CORE, ORE, and Walking Mountains).
- CORE will represent Energy Smart Colorado partners in contract negotiations, and act as lead for contract implementation. For natural gas agreement, this means operating a central call center and administrative services.
- Eagle County staff will continue assistance to non-profit partners, as necessary and appropriate, to secure additional funding through local communities, regional governments, and utility service providers.
- When the entity is established and functioning to the satisfaction of the three DOE grant partners in 2014, the shared program assets (including the loan fund) will be transferred from ECG to the new entity through a transition agreement.

**Verification of Data**

Attached are the following:

- Customer Satisfaction Surveys
- Economic Impact Analysis of Eagle County, Colorado Energy Smart Program, Summary Report, prepared by Marshall Goldberg, MRG & Associates
- Climate-specific modeled savings of energy improvement thresholds, Chuck Booten, NREL

**Developed Products**

Attached are the following:

- Marketing pieces / collateral pieces that we found effective.
- Energy Smart Colorado, Program-To-Date Report 020813
- Energy Smart BPI Training Curriculum
- Energy Smart Home Designation: Research completed by the University of California shows that homes with green labeling sell for 9% more than similar homes without it. Applying this value-added approach to our program, we designed Energy Smart Home medallions which are physically attached to homes that complete an assessment and energy improvement modeled to save at least 15% of prior energy use.





## Examples of Marketing Materials

Seasonal advertising, specific to our local community (rural / resort)



**GET AIR**  
Under Energy Savings

**Come to Green Drinks Tonight at the Energy Smart Resource Center 5:30-7:30 111 AABC Suite M**

**\$1000 REBATE\***

**Energy Smart Expert Rebate:**

Replace inefficient heating equipment with new, 92% efficient sealed combustion units. **or** Upgrade the efficiency of your home by 20% thru a combination of improvements.

**\$200 REBATE**

**Energy Smart Intermediate Rebate:**

Make energy efficient improvements such as air sealing and insulation, water heating, doors and windows.

**\$50 ASSESSMENT**

**Energy Smart Beginner Assessment:**

An Energy Smart home energy assessment.  
A \$400 value!

**\*Rebate Deadline Extended to 3/31/2012!**

Call now to take advantage of energy saving rebate options!  
**970.925.9775**

  
**EnergySmart**

For More Information: [Pitkin@EnergySmartColorado.com](mailto: Pitkin@EnergySmartColorado.com)  
[www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)

# Your Season Pass to Energy Savings

**UP TO \$1000**  
in Rebate Rewards\*  
**Act Now!**  
Offer Expires 2.29.12

**2011/2012 ENERGY SMART**



ELLEN HARRIMAN  
Gunnison County HomeOwner

OCCUPATION:  
Gunnison City Mayor Pro Tem

- ☒ home energy assessment
- ☒ new furnace
- ☒ new windows
- ☒ insulated door
- ☒ super insulated
- ☐ air sealing
- ☒ draft-free!

  
**EnergySmart**

\*THIS PASS ENTITLES BEARER UP TO 40% IN REBATES ON COST OF PROJECT UP TO \$4001

Call 970.641.7682  
to Enjoy Great Energy  
Savings this Winter

For more information: [gunnison@energysmartcolorado.com](mailto:gunnison@energysmartcolorado.com)  
[www.energysmartcolorado.com](http://www.energysmartcolorado.com)

Testimonial:

## Greetings from CORE!

Thank you! You've already made the choice to install an energy efficient appliance or renewable solar energy at your home.

As your local energy efficiency and renewable energy resource, CORE would like to offer you another way to save money and conserve our natural resources.

Energy Smart Colorado is a program available to Pitkin, Eagle and Gunnison County residents that CORE manages in the Roaring Fork Valley. Energy Smart offers a one-stop shop to help you increase the comfort, safety and affordability of your home. New this summer, financing options are available up to \$25,000 through the Energy Smart Colorado Home Efficiency Loan.

Numerous residents in our area have already taken advantage of a low-cost assessment -- \$50 for a \$450 value -- and used that valuable information to improve their homes.

### HOW CAN ENERGY SMART HELP YOU?

- Get a low-cost assessment to find the best possible money-saving measures specific to your home.
- Find a qualified, professional contractor to do the upgrade work.
- Receive a rebate of up to \$500.
- Apply for a low-interest Energy Smart Loan to help finance bigger projects.

### WHAT TYPE OF PROJECT CAN YOU DO?

- Air & duct sealing
- Insulation
- Furnace/boiler upgrade (with additional \$500 rebate from CORE)
- LED lighting
- Programmable thermostats
- Water heater
- Solar thermal (with additional rebates of \$1000 or more from CORE)
- ...And more!

### OWN A BUSINESS?

Energy Smart offers free energy consulting and a suite of rebate options for businesses, too.

*Now is the time to act, before the pre-winter rush and while rebates last.*



Thanks for making our world better!  
—The CORE & Energy Smart Team

Call us now to get started at  
970.925.9775 or go to:  
[EnergySmartColorado.com](http://EnergySmartColorado.com)

## What they're saying...



"The office walked me through everything I needed to do."  
SUMMIT POINT • ASPEN



"This boiler is worth every penny!"  
JOHN ROLAND • WOODY CREEK



"To live here, you have to keep your costs down."  
WILLIE VOLCHAUZEN • WOODY CREEK





Spring / Earth Day Poster – consistent message is “easy and affordable”:



# Get Your Green On with Energy Smart!

**REBATE OFFER:**  
50% of total project cost, up to \$500!

**3 EASY STEPS** towards your Energy Smart \$500 Rebate

- 1 **Sign Up** as an Energy Smart Participant, and complete a Home Energy Assessment.
- 2 **Work with your Analyst or ERC** to identify projects to achieve 15% modeled energy savings.
- 3 **Submit a rebate request form** with paid invoices, and before & after photos of work.

**EnergySmart**  
COLORADO

Call Your County Energy Smart Resource Center or Sign Up Online!  
Eagle: 970.328.8777 | Gunnison: 970.641.7682 | Pitkin: 970.925.9775

[www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)

Neighborhood door to door promotion:



Energy Smart Colorado is currently conducting assessments in your neighborhood. We have already helped hundreds of Eagle County residents find affordable ways to make their homes safe and comfortable while saving money on their utility bills.

FOR MORE INFORMATION:  
Call your Energy Smart Service  
Provider [see other side] or  
call your Eagle County Energy  
Smart Resource Center:  
970.328.8777



[EnergySmartColorado.com](http://EnergySmartColorado.com)

Case Study Advertisement, health and safety focus:

## From Carbon Monoxide Danger to Monthly Savings



*"In order to live here, you have to keep your costs down!"* —WILLIE VOLCKHAUSEN

**ASPEN RESIDENT:** Willie Volckhausen, Woody Creek

**HOME ASSESSMENT FINDINGS:** A carbon monoxide alarm went off multiple times, leading Willie to get an assessment. His Energy Smart analyst found a disconnected furnace flue vent that was leaking carbon monoxide into the home.

**ENERGY EFFICIENCY PROJECT:** Willie remedied his disconnected flue and replaced his old furnace with a properly installed 95% efficient unit, thereby correcting the safety problem and reducing his fossil fuel consumption.

**DOLLAR SAVINGS:** \$35 per month in winter

**RESOURCE SAVINGS:** 30% natural gas reduction

**BENEFIT:** Willie can sleep soundly, with a furnace that is both safer and much quieter.

**Better Buildings = Warm, Safe & Healthy Homes**



CALL TODAY FOR A HOME ASSESSMENT OR TO LEARN ABOUT REBATES AND OUR NEW ENERGY SMART LOAN! 970.925.9775 OR [PITKIN@ENERGYSMARTCOLORADO.COM](mailto:PITKIN@ENERGYSMARTCOLORADO.COM)

[EnergySmartColorado.com](http://EnergySmartColorado.com)



Energy Smart Certification advertisement, icon attached to county property record:

**Energy Smart Homes are  
Safe. Healthy. Efficient. Comfortable.**



**Energy Saving  
Rebates & Financing  
are Available for a  
Limited Time Only!  
Call Now for More  
Information.**

**An ENERGY SMART HOME designation adds to  
the comfort and value of your home.**

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**Find out how to make your  
home Energy Smart!  
Call 970.328.8777 or go to:**

**[www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)**

Online Banner Advertising for loan program:



**3.75%  
financing on a  
5 year loan.**

**The Energy Smart Home Energy Loan**  
Pay off your loan with what you save...



## A Case Study

### THE VILLAS AT BRETT RANCH

**ENERGY & COST SAVINGS:** Residents now report their homes are warmer in the winter, cooler in the summer, and have better air quality. The HOA called Energy Smart to study and solve the neighborhood's high gas problem.

**HOME ENERGY ASSESSMENT:** Building analyst David Zilar tested the safety and efficiency of the heating system. Blower-door testing and thermal imaging illustrates the problem, with glowing color on the images showing where heat was leaking out of the buildings. Uninsulated heat in garages, and sub-par insulation in the attics of all 23 buildings were the main culprits.

**ACTIONS TAKEN:** Thermostat controls were installed in each of the 23 buildings, limiting the garage heat to 45 degrees. Attic insulation was doubled in 12 of the buildings, with completion of the balance scheduled for 2014.

**Dollar savings appear like an annuity payment year after year, providing money for other HOA projects- and, perhaps most important- additional value to the property- by turning old energy use by more than 15%, the villa is now an "Energy Smart Neighborhood" which means the homes will fetch a better price when sold.**

— CLIFF THOMPSON, HOA PRESIDENT

**On the cover:** Your Energy Smart team from left to right: Top row — John Grubbs, Sarah Olson, Lisa Falkowski, Lindsey Abel, Mary Hoarney, Bart Lammend Bottom row — Amanda Poirier, Maya Silver, Tim Lockick, Jonathan Lockman, Kristin Van Housen, Photo taken by ADAM PARNER.




## Energy Smart Colorado Utility Partners

Utility providers are an important part of the Energy Smart Colorado program. Energy Smart collaborates with regional utility partners on rebate programs and other initiatives that help homeowners reduce their energy use and cost. Utilities provide funding that makes the program more affordable for homeowners, and Energy Smart Colorado looks forward to expanding these successful partnerships.

## Energy Smart Colorado: Looking Forward

Energy Smart Colorado is in the process of applying for 501 (c)3 designation as a non-profit organization. Energy Smart plans to pursue local government and utility partnership funding, and include modest participation fees to sustain the program beyond the DOE grant funding, which will sunset in August 2013.

Energy Smart Colorado is starting to pop up in other Colorado communities. Starting an energy efficiency program from scratch is a lot of work, so we help other Colorado communities to jump-start their program by sharing the Energy Smart brand, operating guidelines, database, and loan program structure.

Please Send Inquiries to: [info@EnergySmartColorado.com](mailto:info@EnergySmartColorado.com)  
or Visit: [www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)



## 2013 Energy Smart Colorado

### PROGRAM-TO-DATE REPORT | FEBRUARY 2013



## Making Home Energy Improvements Simple and Affordable

**OUR VISION:** Energy Smart Colorado transforms local energy efficiency markets and stimulates home energy improvements through access to information, financing and skilled workforce.

**HISTORY:** With \$4.9 million in seed funding from the U.S. Department of Energy's Better Buildings Neighborhood Program, the counties of Eagle, Pitkin, and Gunnison in Colorado launched Energy Smart in January 2011. Energy Smart has two primary goals:

- 1 Reduce home energy use and cost by 15%
- 2 Create a replicable, self-sustaining program for communities in Colorado



[www.EnergySmartColorado.com](http://www.EnergySmartColorado.com)





## Program-to-Date Report, February 2013 (cover and back page)

### Energy Smart Community Benefits

In addition to saving energy, the Energy Smart Program provides many other benefits to participating communities:

- JOB CREATION:** With over 150 contractors participating in the program, Energy Smart supports the energy services component of the building industry by providing training, driving demand, and linking property owners directly to qualified local contractors.
- ENVIRONMENTAL PROTECTION:** Reducing energy use in buildings decreases the greenhouse gases we release into the atmosphere. To date, Energy Smart has reduced pollution by 4,814,692 lbs of CO<sub>2</sub>, the equivalent of NOT burning 253,404 gallons of gasoline.
- HEALTHY HOMES:** During energy assessments, analysts identify life safety and health issues inside the home, including gas leaks and carbon monoxide. Energy Smart also offers free testing for radon, which is the 2nd leading cause of lung cancer in the United States. More than 10% of the participating homes had health and safety concerns that were reported to the homeowner during the Home Energy Assessment. To date, the program has identified and assisted with 208 gas leaks and

carbon monoxide issues as well as moisture and mold problems that would otherwise go unnoticed, leading to chronic health problems and even fatalities.

**COMFORTABLE HOMES:** In the cold climate of the Colorado mountain region, an un-insulated, leaky house can mean freezing pipes, cold floors and uncomfortable drafts. By updating heating equipment, air sealing and upgrading insulation, Energy Smart homeowners enjoy warmer, safer, more comfortable homes.

**COST SAVINGS:** Reducing energy usage means reducing home utility bills. An extra \$50 saved every month can make a big difference. To date, Energy Smart participants have saved an estimated \$455,996 in annual energy costs.

So many people love to themselves, I tried to make more energy. Well, sometimes the best way to do that is to save money on things like energy, for example, — Greg Sweeney, Energy Smart homeowner

### Metrics of Success

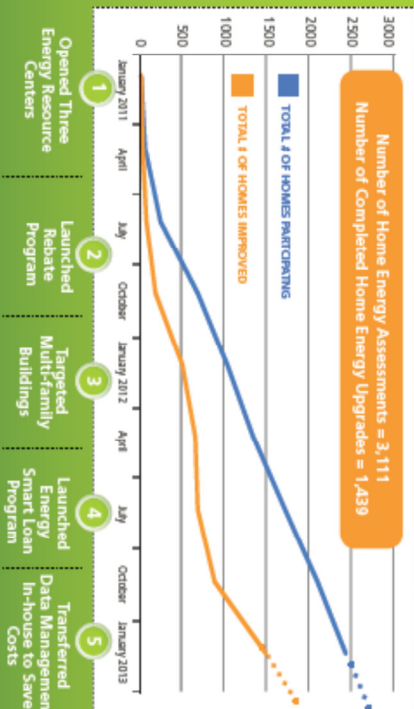
**Upgrade Cost & Savings**  
Total Project Cost: \$3,730,985  
Annual Energy Savings: \$455,996

**Job Creation**  
Number of Contractor Partners: 153  
Hours worked in homes: 15,708

**Health & Safety**  
Detected Gas Leaks or High Levels of Radon: 208

**Environment**  
Annual Carbon Savings: 4,814,692 Lbs

Number of Home Energy Assessments = 3,111  
Number of Completed Home Energy Upgrades = 1,439



Opened Three Energy Resource Centers  
Launched Rebate Program  
Targeted Multi-Family Buildings  
Launched Smart Loan Program  
Transferred Data Management In-house to Save Costs

### Energy Smart Resource Centers

**Access to Information:** Each participating county operates an Energy Resource Center (ERC), providing homeowners and contractors with a local reliable one-stop shop for information and services. Each ERC is staffed with a Building Performance Institute certified Home Energy Advisor who provides expert advice, coaching, and assistance with enrollment, home energy assessments, and improvement projects.

Energy Smart informs the public through an informational website, direct phone line, educational articles, advertising, public presentations, and publications like the Energy Smart Service Provider List, the Energy Rebate Check Sheet and the Energy Efficiency Pocket Guide.



### Access to Financing:

Energy Smart provides direct rebates for energy improvement projects and also maintains up-to-date information on other financial incentives from utilities, state and local governments, and federal tax credits.

In July 2012, the Energy Smart Loan Program became available to the public. With a simple application process and interest rates starting at 3.75%, it's a great, accessible tool for homeowners to use in upgrading their homes. Since its launch, 7 homeowners have been issued loans for energy improvements and 7 more have been approved for financing. Loan transactions are managed by Funding Partners, a Community Development Financial Institution based in Fort Collins. Contractors act as liaisons for the financing program, assisting their clients in designing eligible projects and submitting the application. This innovative approach has worked well, with contractors playing an active role in marketing the financing to their clients.

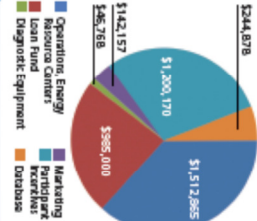
### Access to Skilled Workforce:

Energy Smart Colorado continues to focus on job creation through building a team of qualified energy service contractors in each of our local communities. Over 150 contractors currently participate in the program and benefit from training, networking, equipment loan programs, and co-branded marketing. In October 2012, Energy Smart hosted its first Building Performance Institute (BPI) Building Analyst training in Gunnison.



"Most of the energy industry has been steadily continuously improving. Since the program started there were more than anyone I knowed in the program on hand, which is good." — TRAVIS SWEENEY, BUILDING ANALYST SERVICES & ENERGY SMART CONSULTANT

### Program Expenses to Date



### A Case Study: Aspen Resident: Willie Volkhausen

**HOME ASSESSMENT FINDINGS:** A carbon monoxide alarm went off multiple times, leading Willie to get an assessment. He Energy Smart analyst found a disconnected furnace flue vent that was leading carbon monoxide into the home.

**ENERGY EFFICIENCY PROJECT:** Willie remedied his disconnected flue and replaced his old furnace with a properly installed 95% efficient unit, thereby correcting the safety problem and reducing his fossil fuel consumption.

**DOLLAR SAVINGS:** \$35 per month

**IN WINTER:** 30% natural gas reduction

**BENEFIT:** Willie can sleep soundly, with a furnace that is both safer and much quieter.



### Why Do homeowners "Go" Energy Smart?

After analyzing data from customer satisfaction surveys, the Program found that the primary motivations for joining the program are saving money (80%), and reducing environmental impacts (20%).

In-house training for BPI certification:



### Gunnison BPI Building Analyst Certification Training

This training will qualify candidates to take the BPI Building Analyst (BA) written and field exam. Classroom work will concentrate on Building Science principles and their relation to existing buildings. The field work will put these building science principles to practical use on real buildings. Course objectives are to prepare the candidates to perform comprehensive energy and building health and safety inspection on buildings.

**Course Location:**

The course will be held in Gunnison, Colorado on the Western State Colorado University campus in the Taylor building room 113. 600 Adams St. Gunnison CO, 81230.

**Course cost:** \$1000.00

Energy smart contractors will be given a \$500 tuition reimbursement upon proof of passing field and written exams.

A \$500 down payment for the course will be required.

**Course dates and times are as follows:**

Classroom training: Monday October 29th thru Thursday November 1st. 8:00am to 5:00pm

Friday will be a free day to conduct business or travel back to your home towns.

Field training: Monday November 5<sup>th</sup> thru Wednesday the 7<sup>th</sup>.

Written exam: Morning of November 8<sup>th</sup>. *You will need to come to test day with a lap top or pad that can get online with internet Explorer.*

Field Exams: Afternoon of November 8<sup>th</sup> and all day June 9<sup>th</sup>.

We will make the best effort to field test out of town candidates first.

**Required reading:**

*Residential Energy* 5<sup>th</sup> edition by Krigger and Dorsi

This text is included with your course fee