Annual Report

COLORADO ENERGY OFFICE 2014/2015

Table of Contents

LETTER FROM THE DIRECTOR 1

MISSION AND VISION 2

SUCCESSES 3

PROGRAMS 5

Residential Energy Efficiency 5
Energy Performance Contracting 8
Dairy and Irrigation Efficiency Program 11
Energy Savings for Schools 14
Transportation Fuels 17
Weatherization 21
Policy & Legislative Summary 26

Photos: cover, pp. 2 & 3: Colorado Tourism Office

LETTER FROM THE DIRECTOR

We are pleased to present our fiscal year 2015 Colorado Energy Office annual report.

Coloradans want the opportunity to make energy-related choices that benefit both the economic and environmental health of the state. By capitalizing on Colorado's diverse energy resources, innovative technology, and long-standing energy efficiency programs, the Colorado Energy Office is transforming how Colorado produces and consumes energy.

In 2014, we literally broke ground as we rolled out the ALT Fuels Colorado program to build alternative fuel infrastructure along Colorado's key travel corridors. The program awarded grants for compressed natural gas fueling stations, advancing development along I-70 and several other critical statewide routes and laying plans for natural gas vehicle mobility along I-25.

Concurrently, we made awards for electric vehicle (EV) charging units outside of the Denver metro area, significantly expanding transportation confidence for EV drivers.

Throughout the year, we continued to build on the successes of existing programs. Lessons learned through past K–12 school programs were used to create Energy Savings for Schools, an energy efficiency program to assist resource-constrained rural schools. Our Energy Performance Contract program, ranked among the top five programs in the nation, impacted multiple public buildings, and our weatherization program, in place for more than 30 years, served thousands of low-income households. In each case, our office provided a

vital service to help Coloradans implement cost-effective energy saving measures that will have an impact for decades to come.

We have a solid lineup of successful projects in place and more exciting things to come in fiscal year 2016.

Thanks to all our partners for their continued support and dedication.

Jeffrey Ackermann

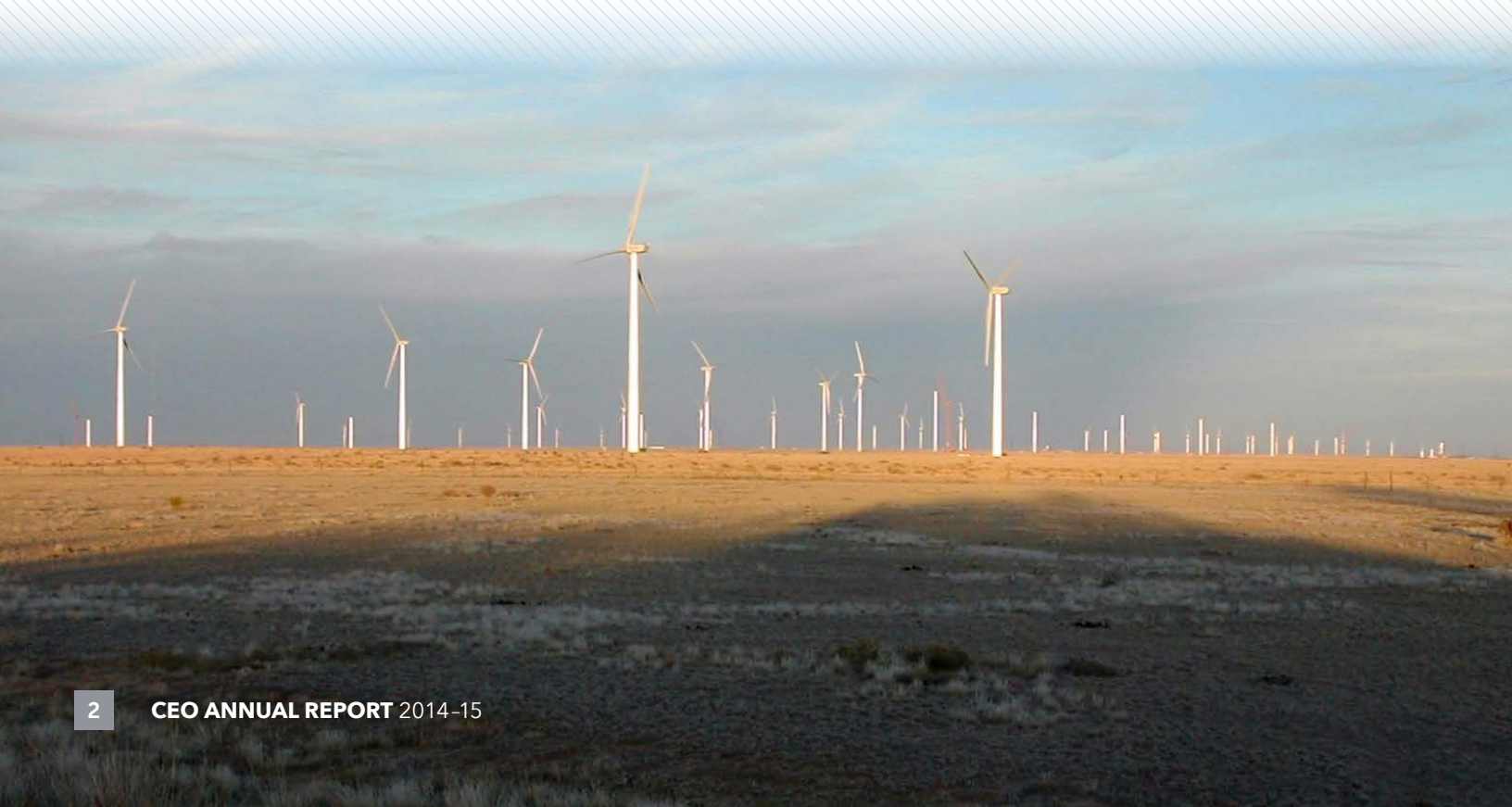
02 Mission & Vision

MISSION STATEMENT

The Colorado Energy Office mission is to improve the effective use of all of Colorado's energy resources and the efficient consumption of energy in all economic sectors, through providing technical guidance, financial support, policy advocacy and public communications.

VISION STATEMENT

The Colorado Energy Office vision is to help Coloradans live more prosperous and healthy lives by promoting innovative energy production and efficient energy consumption practices that are beneficial to the economic and environmental health of the state.



03 Successes

- CEO partnered with the U.S. Department of Energy to include the Home Energy Score in CEO's residential program. The Home Energy Score rates a home's energy performance and compares it to other homes nationwide. Energy assessors score the home, provide a list of recommended energy improvements, and detail the energy savings associated with the improvements. CEO finalized the infrastructure to launch the new tool in FY16.

- Since Colorado established its Energy Performance Contracting (EPC) Program in the mid-1990s, 140 public jurisdictions have worked with an Energy Service Company (ESCO) to identify nearly $31 million in annual utility savings through a technical energy audit. Because each technical energy audit is "investment-grade," the ESCO's guarantee of utility savings has been leveraged to attract financing for $487 million in capital improvement funds. As of June 2015, a running total of 188 EPC projects have improved the performance of public school and university buildings, veterans facilities, libraries, parks, community centers, wastewater treatment plants, prisons and other government buildings in communities across 75% of Colorado's counties.

- Through the ALT Fuels Colorado program, CEO awarded grants for 11 compressed natural gas fueling stations, laying plans for full natural gas vehicle mobility along I-25 and advancing corridor development along I-70 and several other critical statewide routes. Through the Charge Ahead Colorado program, CEO awarded 50 electric vehicle (EV) charging units outside of the Denver metro area, significantly expanding destination options for EV drivers.

- CEO performed an in-depth evaluation of the Colorado Dairy and Irrigation Efficiency Pilot Program that launched in FY2014 and created the infrastructure for a new statewide program. Building on the success of the 2014 pilot program, the statewide Colorado Dairy and Irrigation Efficiency Program starting in FY16 will provide free energy audits, preliminary renewable energy assessments, and technical and implementation support services for a minimum of 80 dairy and powered irrigators annually.

- The CEO Weatherization Assistance Program delivered service to 3,050 eligible households throughout the state. The installed measures saved clients a combined $522,522 on their energy bills, over 287,000 therms of natural gas, and more than 1.7 million kilowatt-hours of electricity. These savings are realized through site-specific energy audits, and activities to reduce energy loss — such as sealing air leaks, installing insulation, and replacing inefficient appliances. These changes create long-term savings and improve home comfort for the program's clients.

05 Residential Energy Efficiency

RESIDENTIAL ENERGY EFFICIENCY

The Colorado Energy Office worked with the U.S. Department of Energy to introduce the Home Energy Score in Colorado.

The Home Energy Score gives REALTORS®, homeowners and homebuyers a simple snapshot of a home's energy rating and energy efficiency features. Home Energy Score-knowledgeable assessors will score the home, provide a list of recommended energy improvements, and detail the energy savings associated with the improvements.

A home is scored on a scale of 1 to 10, where 10 means that the home has excellent energy performance. A score of 1 means that the home needs extensive energy improvements. A home of 5 is the average for that area, no matter what part of the state it is in, due to the use of local weather data to keep the information locally relevant. This system allows a better comparison of a home to others within the same neighborhood.

In this fiscal year, CEO built the infrastructure to launch the Better Buildings Colorado Home Energy Score in FY2016. CEO also built strategic partnerships with the realtor industry and developed outreach strategies to educate both REALTORS® and consumers on the value of using the Home Energy Score. Simultaneously, CEO trained assessors on how the score affects home values.

PROGRAM HIGHLIGHT: Mortgage Incentive Program for Existing Homes

Tyler Benton owns a 1,700 sq. ft., 3-story, 2-bedroom townhouse that he wanted to refinance, and it needed some work, especially energy efficient improvements to protect the home and make it more comfortable during Glenwood Springs' raging mountain winter snowstorms.

"I was able to qualify for the Colorado Energy Office's (CEO) refinance program (Colorado Energy Saving Mortgage Incentive for Existing Homes)," Benton said. "I found the program through the Garfield County CLEER (Clean Energy Economy for the Region) and their website. I wanted to qualify for their rebates and found a link to the CEO incentive."

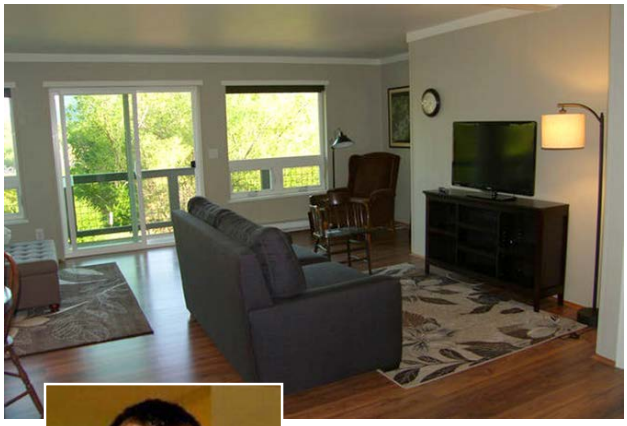
Benton was refinancing his townhome, which qualified him for one of the CEO incentive program's pathways. An energy concierge performed an energy efficiency audit of Benton's home, starting with a door blower test to determine how many leaks would allow heat or cooled air to escape.

The energy audit identified two key areas to improve.

"After the audit, we walked through which improvements would give the best bang for the buck, and those were what I was able to accomplish," Benton said. "Windows and insulation were both the auditor's focus and mine."

The incentives for the Colorado Energy Saving Mortgage Incentive for Existing Homes program is based on a refinanced home's improvement on its Home Energy Rating System (HERS) rating, a measure of home energy use. The measurement helps owners understand how their homes perform, compared to homes built in 2006.

As a result of the improvement Benton made on his townhouse, he qualified for a $2,500 incentive.



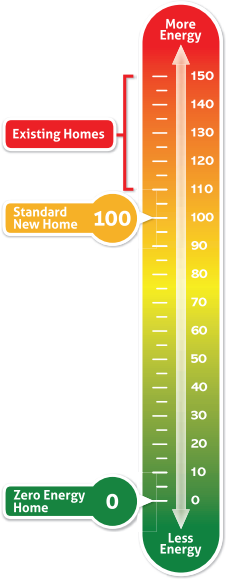
Through CEO, Benton worked with Vectra Bank in Glenwood Springs to apply for the mortgage incentive.

"This was Vectra's first experience with the CEO incentive, and it was a great process," said Carolyn Meadowcroft, Senior Residential Loan Officer/VP at Vectra Bank in Glenwood Springs.

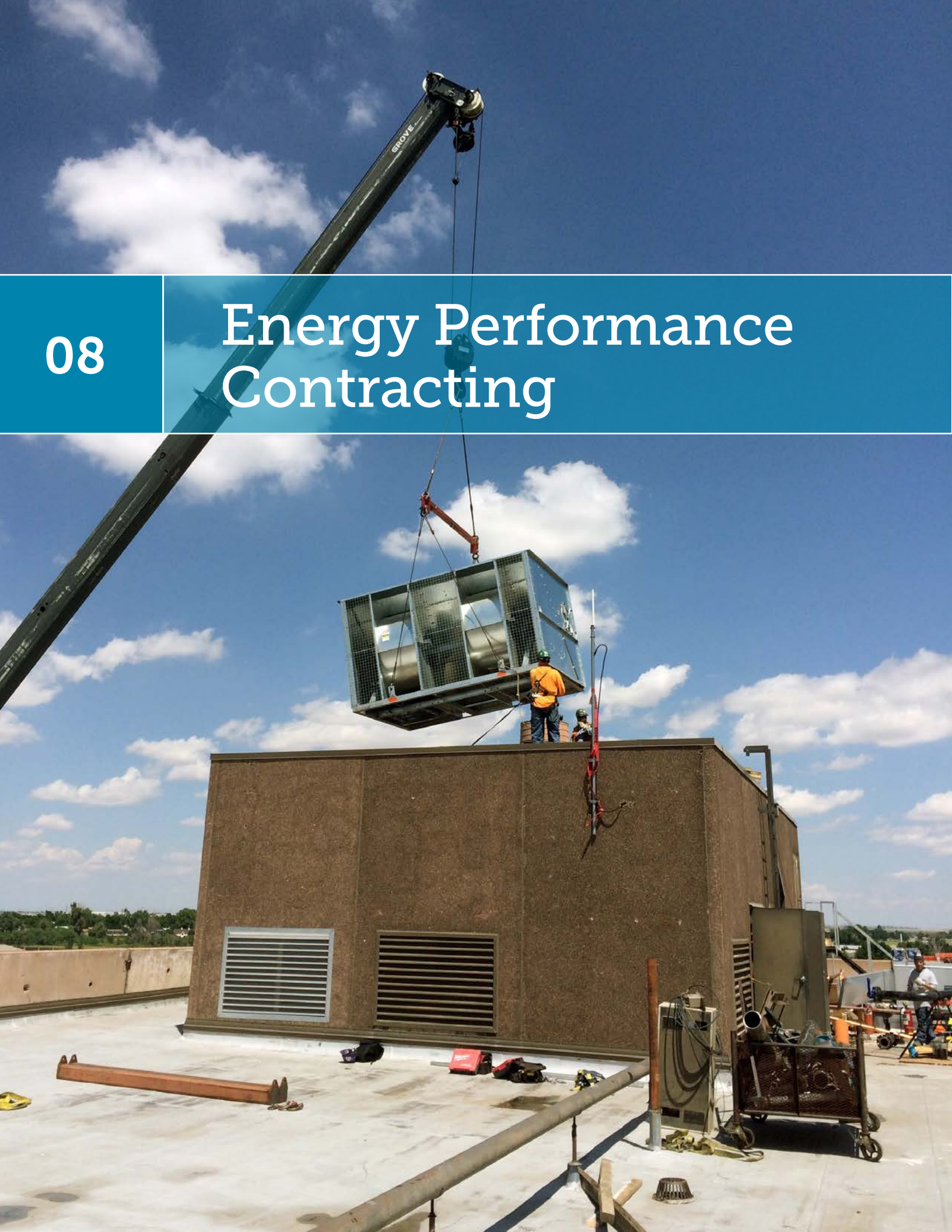
Meadowcroft learned about the Colorado Energy Saving Mortgage Incentive for Existing Homes program at both a Board of REALTORS® meeting and a conference. When Benton wanted to refinance his townhouse, he asked about the incentive program.

"I advised him to get the HERS report," Meadowcroft said. "It was really simple. I sent in only two or three forms after Tyler had done the energy efficiency improvements that the HERS report recommended."

Meadowcroft said that she would recommend the program to more clients and other bankers.



08 Energy Performance Contracting



ENERGY PERFORMANCE CONTRACTING

The Colorado Energy Office has a proven financing mechanism called Energy Performance Contracting to help public jurisdictions save energy costs, conserve water and improve building conditions.

The Energy Performance Contracting Program pre-qualifies energy service companies to work with Colorado's state agencies, institutions of higher education and all types of local governments. These companies adhere to the program's standards for success as they identify electrical, mechanical and plumbing improvements that will reduce utility expenses and address long-standing, controlled maintenance needs in public buildings and other facilities.

The Energy Performance Contracting Program also includes state- and industry-approved contracts, rigor in audit protocols, guidance documents, communication protocols, and toolkits to aid a jurisdiction in selecting an energy service company (ESCO) and securing private sector financing.

By executing a Memorandum of Understanding and agreeing to select a pre-qualified ESCO, all jurisdictions can receive free assistance in stewarding technical, legal and financial aspects of energy performance contracting during the entire lifecycle of a project.

Since Colorado established its Energy Performance Contracting Program in the mid-1990s, 140 public jurisdictions have worked with an ESCO to identify nearly $31 million in annual utility savings through a technical energy audit. Because each technical energy audit is "investment-grade," the ESCO's guarantee of utility savings has been leveraged to attract financing for $487 million in capital improvement funds. As of June 2015, 188 EPC projects have improved the performance of public school and university buildings, veterans facilities, libraries, parks, community centers, wastewater treatment plants, prisons and other government buildings in communities across 75% of Colorado's counties.

PROGRAM HIGHLIGHT: Arapahoe County Facilities

Arapahoe County began the second phase of energy efficiency improvements in county buildings with a second Colorado Energy Office Energy Performance Contract.

Arapahoe County's first phase of the project began in 2007. By 2014, the project had yielded $1.23 million in annualized savings for the county.

"That savings was a big reason for us to go into the second phase," said Dick Hawes, Arapahoe County Facilities and Fleet Management Director. "There were a lot of things we didn't do in the first phase that have changed technology-wise. We amortized the cost in six and a half years rather than 10 years. Now we just want to expand what we had done in the first phase and take advantage of new opportunities that now have the payback we're looking for."

During the first phase, Arapahoe County had some relatively new equipment that was not ready to be replaced. But in the next phase, it was time to replace that equipment with lower-cost usage, energy-efficient equipment.

The second phase addressed energy efficiency work on 26 buildings with a total project cost of $7.75 million. The work included lighting efficiency upgrades, programmable thermostat installation, replacement of outdated rooftop units, water source heat pump replacement, cooling water system replacement and end water use conservation.

The second phase will result in energy and water reduction in all Arapahoe County facilities as well as improved comfort levels and a reduction in maintenance costs.

"We're really pleased with the efforts of the second phase," Hawes said. "We're pleased with saving money and, more importantly, see this as part of our overall efforts to reduce energy."

11 Dairy & Irrigation Efficiency Program

DAIRY AND IRRIGATION EFFICIENCY PROGRAM

In the 2013 Colorado Agricultural Energy Market Research Phase II: Market Research Report, the Colorado Energy Office (CEO) learned that the Colorado agriculture industry spends more than $400 million annually on energy, equaling 7% of the industry's total expenses. Dairy and irrigation operations were found to be the most energy intense.

In response to this, CEO launched the Colorado Dairy and Irrigation Efficiency Pilot Program in the spring of 2014. The office provided free energy audits and technical support to 12 agricultural producers. Irrigators received an energy audit and technical support, and were offered project incentives to implement improvements outside of their growing season.

During the pilot, CEO issued grants up to $25,000 to producers that implemented recommended improvements identified by the energy audits. The incentives were designed to mimic project incentives available through federal programs. Eight producers implemented improvements, investing $233,000 and leveraging $168,000 in incentives, including utility rebates.

The project objectives for producers included a reduction in energy use (in kWh, therms, and gallons of propane), an increase in environmental benefits (GHG reduction and air quality improvements), and cost savings.

The successful pilot project closed at the end of FY2014. In FY2016, the statewide Colorado Dairy and Irrigation Efficiency Program will provide free energy audits, preliminary renewable energy assessments and technical and implementation support services for a minimum of 80 dairy and powered irrigators annually.

The program will make Colorado producers more competitive by providing critical economic savings that improve the financial operation of their farms.

PROGRAM HIGHLIGHT: Cleland Dairy Farm

The Cleland Dairy Farm near Erie has 450 dairy cows producing enough milk to fill more than 3,000 one-gallon cartons per day. The milk has to be cold and the cows have to be comfortably warm. For the Clelands and other dairy farmers like them, that means the cost of electricity is one of their operation's top expenses, right next to feed.

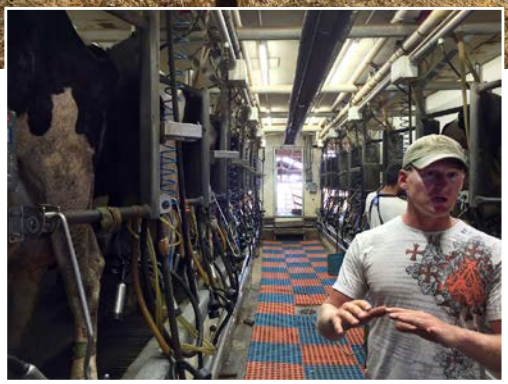
Three generations of Clelands have owned the Weld County dairy farm, and they all have explored various ways to lower costs. When the Colorado Energy Office's (CEO) Colorado Dairy and Irrigation Efficiency Pilot Program offered free energy audits to improve the energy efficiency of their dairy operation and lower energy costs, the Clelands wanted to be involved.

"This is a program where we think that farmers can cut their energy bills by 10% to 30%," said Michael Turner, CEO's Energy Efficiency Program Manager.

The Cleland's energy audit uncovered several needs, including a new radiant heating system, energy-efficient lighting and non-freeze watering tanks to hydrate the cows. It is estimated that these improvements cut the dairy farm's bills by about 45%. Other recommended energy improvements were put on hold for later action.

The Colorado Dairy and Irrigation Efficiency Pilot Program contributed $15,000 toward the Cleland Dairy Farm's improvements, while the Clelands spent $5,000. Under the pilot program, CEO funded up to 75% of the cost of energy-efficiency improvements up to $25,000.

The Colorado Dairy and Irrigation Efficiency Pilot Program was so successful that a statewide program will launch and serve a minimum of 80 dairy and powered irrigators annually with free energy audits and technical and implementation support services.



For the pilot program, CEO provided an energy consultant, Ensave, to conduct the free energy audit, advise about improvements and their priorities, and help direct financial incentives. GDS Associates was selected to administer the statewide Colorado Dairy and Irrigation Efficiency Program during FY2016.

"We will be there every step of the way, from the energy audit to the end of the project when we confirm that everything is properly installed," Turner said.

14 Energy Savings for Schools

ENERGY SAVINGS FOR SCHOOLS

The average Colorado school building is 41 years old. The U.S. Environmental Protection Agency estimates that inefficient K–12 school facilities have resulted in a waste of 30% of energy.

Rural school districts especially find that limited resources and remote access make it challenging to improve the efficiency of their buildings.

The Colorado Energy Office (CEO) has developed the Energy Savings for Schools program to bring much needed energy management to rural school districts. The program offers rural and low-income school districts free energy and water audits, renewable energy assessments, and technical assistance to help identify and implement priority projects.

Energy Savings for Schools also acts as a bridge to connect school districts to other CEO K–12 programs, potential funding sources, and a peer network for sharing best management practices and successes.

CEO represents a long-term energy partner committed to outreach, building capacity and replicating successes across district buildings.

PROGRAM HIGHLIGHT: K–12 Schools

When the Wiley School District in southeastern Colorado received an El Pomar Foundation grant of $10,000 to replace existing metal halide lights with light-emitting diodes (LEDs), the district contacted the Colorado Energy Office (CEO) to help find matching funds for the gymnasium lighting upgrade project.

CEO arranged for a free energy engineering study of the district's main building to build off of the energy saving opportunities that the school already had identified. The energy study helped determine the potential of lowering utility costs and improving student and staff comfort.

Wiley School District already has reduced energy costs by pursuing efficiency measures. The main school building survey found that the district's gas and electricity bills cost nearly $70,000 annually, with the majority of the funds being spent on electricity in the main building. And so other improvement opportunities were identified for the Wiley School District's consideration.

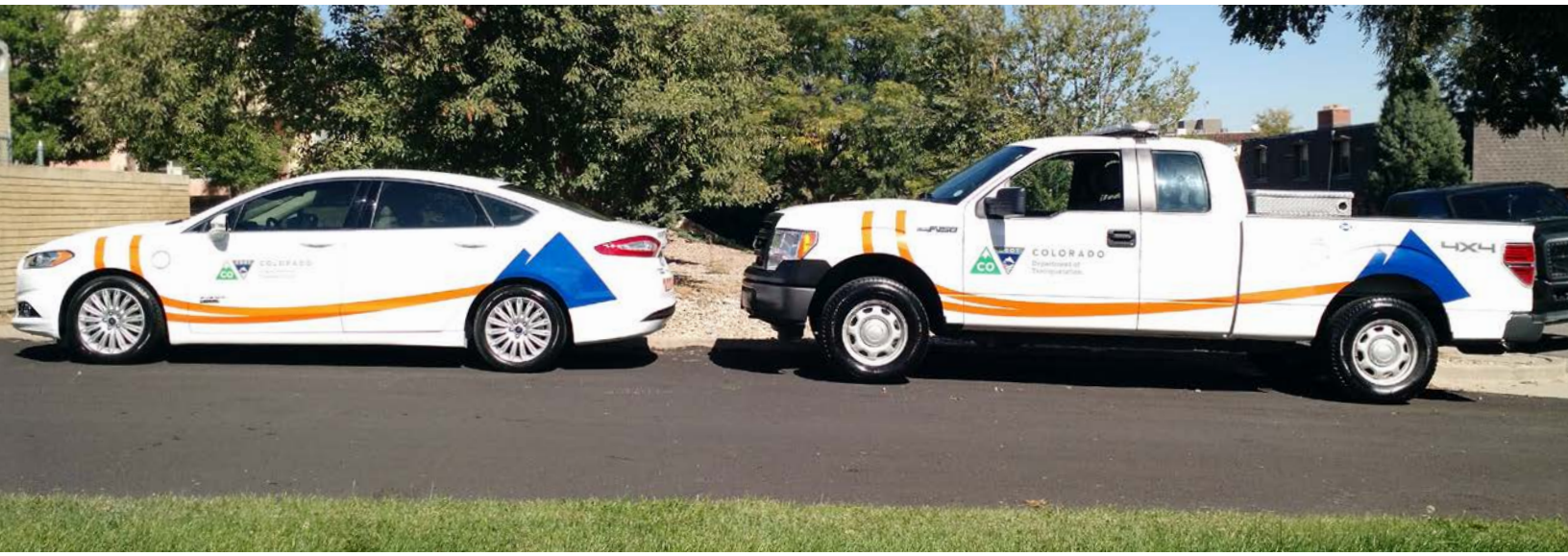
Staff and student habits were studied to identify no-cost and low-cost measures. Energy conservation measures were identified that would require minor changes such as installing dual switching in each classroom and ensuring that insulation had an appropriate rating.

Recommended measures would yield about $7,300 in estimated energy cost savings, an 11% annual energy cost reduction with a likely five-year overall simple payback period.

"It helped us as a small school district," Wiley District Schools Superintendent Dave Eastin said. "One of our goals was to see where we were. The audit gave us some suggestions on how we could be a little greener. With our shrinking budget, every dollar counts for us, and the gym lights were obsolete they were so old. Now we have new LED lights. We're anxious to see the savings in another year or so. It's a terrific program. They can do the assessment for free and it helps me feel not so overwhelmed."

17 Transportation Fuels

TRANSPORTATION FUELS



Colorado is well-positioned to increase consumer adoption of alternative fuel vehicles (AFVs) in the transportation sector, including natural gas vehicles (NGVs) and electric vehicles (EVs). The appeal of alternative fuels in Colorado stems largely from the consistent, low price of electricity and compressed natural gas (CNG) per unit as compared to gasoline or diesel, with added air quality benefits and emissions savings through conventional fuel offsets.

The Colorado Energy Office (CEO) is removing the principal barrier to AFV adoption, which is a lack of publicly available fueling and charging stations, leading to "range anxiety" for drivers. By funding stations for alternative fuel vehicles, range anxiety for potential purchasers will be significantly reduced while empowering individual consumers to make more confident investments in new transportation technologies. Using strategic targeting to install new CNG and EV stations, CEO is committed to advancing Colorado's emerging alternative fuels markets.

Through the ALT Fuels Colorado program, CEO awarded grants for 11 CNG fueling stations, laying plans for full NGV mobility along I-25 and advancing corridor development along I-70 and several other critical statewide routes. Likewise, the Charge Ahead Colorado program awarded 50 EV charging units outside of the Denver metro area, significantly expanding destination options for electric vehicle drivers.

In addition to financial support through CEO's grant programs, the Colorado Energy Office's Refuel Colorado program offers free technical assistance to help fleets identify monetary savings and other advantages available once they convert to alternative fuels. The program is actively involved in building self-sustaining local alternative fuel markets by working with community leaders, fuel providers, and auto dealerships. Refuel Colorado is a statewide program offered free of charge. More information can be found at http://refuelcolorado.com/refuel-colorado-fleets.

FY 2015 Grants

11 CNG Stations Awarded

50 EV Stations Awarded

PROGRAM HIGHLIGHT: Electric Vehicles

On Friday, Oct. 3, 2014, electric vehicle drivers convened for the EV Rally of the Rockies, a scenic fall tour designed to demonstrate destination and range possibilities for EV drivers on Colorado's Western Slope as a result of a growing network of free public electric vehicle charging stations. Many of these locations were funded by grants from the Colorado Energy Office (CEO) through its Charge Ahead Colorado grant program.

Drivers for the EV Rally of the Rockies started in Aspen, Vail, Grand Junction and Snowmass Village, making charging stops in Parachute, Glenwood Springs and Basalt, and ultimately meeting in downtown Carbondale for an electric vehicle party with available test drives, information and refreshments.

At the time of the event, Colorado's Western Slope contained 17 publicly accessible Level 2 charging stations capable of replenishing an EV battery with 25 miles of driving distance for every hour of charging. The number of stations in this area has continued to expand through continued support from the Charge Ahead Colorado program.

"The EV Rally of the Rockies shows that electric car travel can be used for tourism in western Colorado, and that's exciting," said Matt Shmigelsky, a Refuel Colorado energy coach and energy consultant with Clean Energy Economy for the Region (CLEER).

The EV Rally of the Rockies leveraged support from many local and regional agencies including Garfield Clean Energy, CLEER, CORE, the City of Aspen, City of Grand Junction, Town of Parachute, Town of Vail, Town of Snowmass Village, Town of Basalt and Colorado Mountain College. Sponsors for the event were Fuoco Motor Co. of Grand Junction, Mountain Chevrolet of Glenwood Springs and Alpine Bank.

PROGRAM HIGHLIGHT: Compressed Natural Gas (CNG)

Like many Colorado communities, the City of Fort Lupton has experienced operating on a tight budget, and by 2013 when it became necessary for the city to purchase new vehicles for the police and public works departments, they started looking at more economical, cleaner and greener vehicles.

A CNG fueling station already was in place, so city officials chose CNG-powered vehicles as a solution to their tight budget. Federal and county grants enabled the City of Fort Lupton to make a complete switch to a bi-fuel CNG police fleet.

The vehicles have cleaner tailpipe emissions, avoid high maintenance costs, and deliver significant fuel cost savings.

"This is the wave of the future," said Fort Lupton Police Chief Kenneth Poncelow. "Police fleets can save money. It is better to put less money into fuel and more into police work."

Chief Poncelow said that none of the typical concerns, such as vehicle speed capacity, CNG tank space and interior capacity have been issues for the Fort Lupton Police Department with the department's bi-fuel CNG Chevy Tahoes and GMC Yukons.

Poncelow's officers had a brief training period and learned the new steps to CNG fueling, which is not the same as pumping gasoline. However, everyone seemed to adapt quite rapidly.

Fort Lupton's Public Works Department also has three CNG vehicles. Two are Chevy Silverado bi-fuel ¾-ton long-bed pickups. One is an all-CNG Freightliner dump truck, which doubles as a snow plow in the winter. Public Works crews call the dump truck "Big Blue."

City Manager Claud Hanes said that Fort Lupton will continue to use CNG vehicles to replace conventionally fueled vehicles.

When gasoline and diesel prices reached high levels in 2014, Hanes said Fort Lupton saved about $7,500 a year through the lower cost for CNG at the pump. The city is confident that the multiple benefits of CNG make it a good choice even when gasoline prices are low.

21 Weatherization

WEATHERIZATION

The Colorado Energy Office Weatherization Assistance Program (WAP) provides free energy efficiency measures to income qualified households in all of Colorado's 64 counties. In partnership with eight local service providers, the program gives residents the ability to achieve long-term energy reductions, save money on their utility bills, and improve the comfort of their homes. The state of Colorado has administered the program for 38 years, delivering cost-effective, long-term utility bill assistance to Coloradans in need.

Approximately 30% of Colorado's households spend more than 4% of their income on energy bills. The program plays an instrumental role in addressing energy burden throughout the state (see pie chart, page 23). Coloradans who participate in the program save as much as $500 annually on their utility bills. Through participation in the program, Colorado residents are able to spend less of their income on utility bills and more on essential needs, such as food, housing, and medical care. The program creates site specific home improvements to reduce energy burden and bring low-income customers payments closer to parity with their non-income qualified counterparts.

WAP Eligibility — Who is Qualified to Apply?

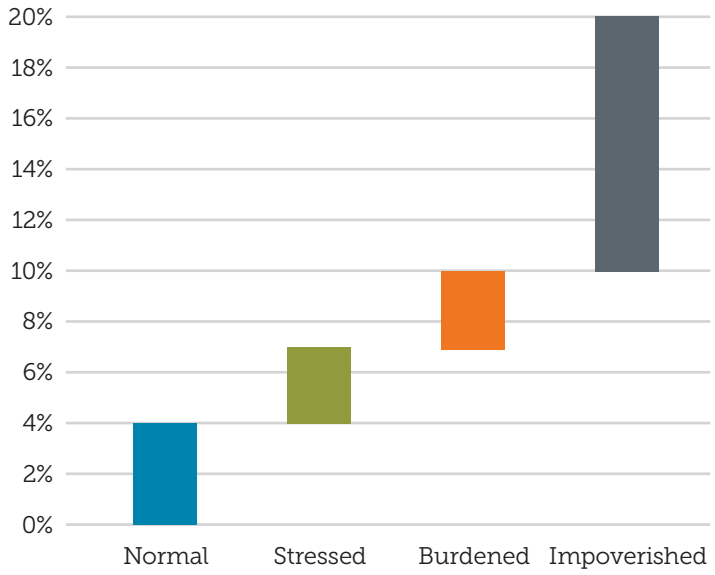
Number in Household	Gross Annual Household Income
1	$23,540
2	$31,860
3	$40,180
4	$48,500
Each additional person	Add $8,320

For this fiscal year, the program delivered service to 3,050 eligible households throughout the state. The associated installed measures saved clients a combined $522,522 on their energy bills, over 287,000 therms of natural gas, and more than 1.7 million kilo-watt hours of electricity. These savings are realized through site specific auditing and the installation of home air sealing, insulation and appliance replacement. These improvements create long-term savings, and noticeable home safety and comfort improvement for the program's clients.

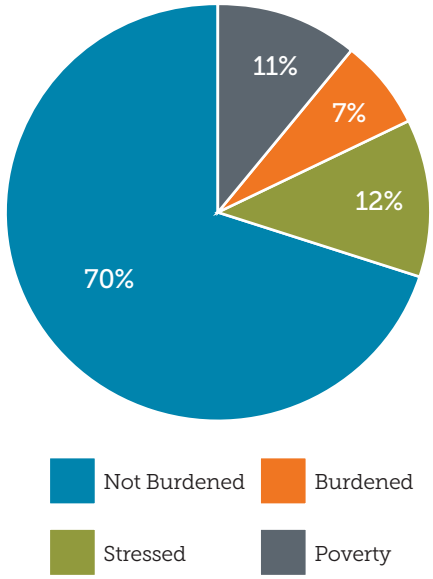
The program is primarily focused on reducing customer energy burden related to home heating. At the end of FY2015, the program included approaches to reduce energy burden for household electric use. Electricity can be much higher than the price of gas and historically

Energy Burden in Colorado

Energy Expenditure % of Income

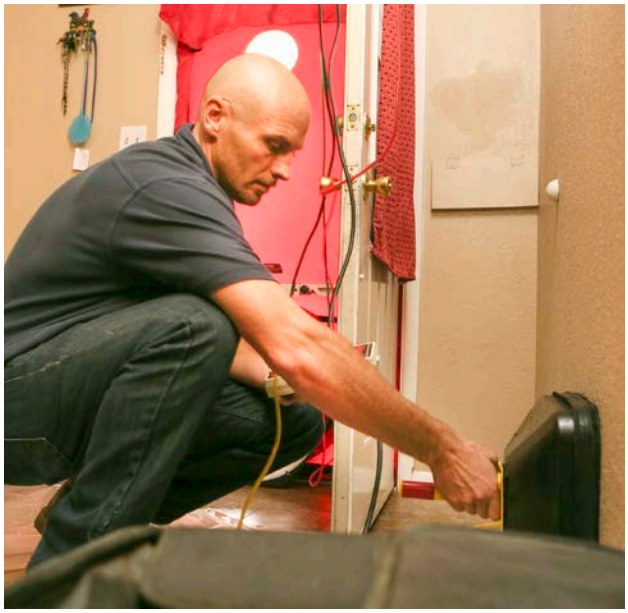


Energy-Burdened Households in Colorado



Census.gov American Community Survey

has increased steadily year after year, while natural gas prices have remained stable. In an effort to target and offset electricity usage, CEO launched a Low-Income Community Shared Solar Demonstration Project. The project will involve the development and implementation of five shared solar demonstration projects with innovative rate structures for low-income households. Cumulatively, the projects will serve a minimum of 300 low-income families living in previously weatherized homes and total at least 1 MW of installed capacity. The goal of this project is to further reduce client energy burden and expand the program to holistically address the needs of low-income households.



PROGRAM HIGHLIGHT: Jerry and Shirley Lehl

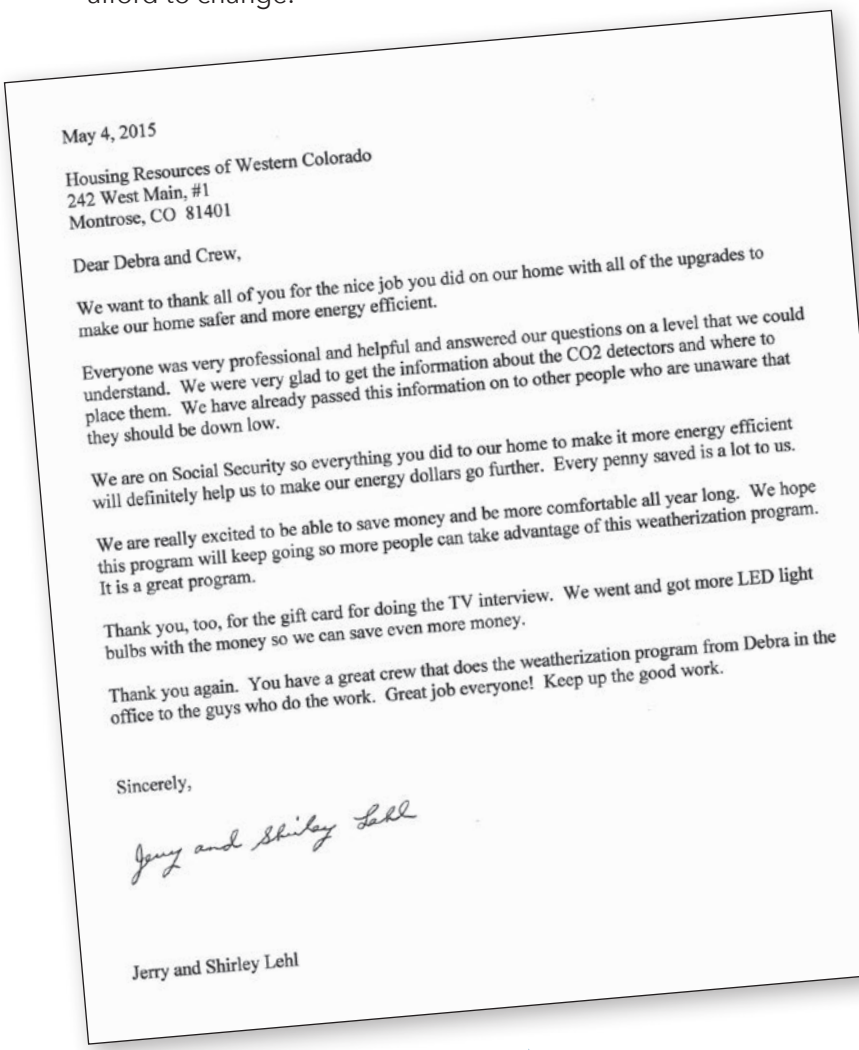
Jerry and Shirley Lehl live in a three-bedroom, 1,450 square foot ranch-style house that was built in 1977. The Montrose residents are energy conscious, but now that they both are on Social Security fixed incomes, they can't afford to make major changes to their home. They believed that they wouldn't qualify for energy efficiency assistance until they went to a senior expo in Montrose. It was there that the couple learned that they automatically qualified for free home energy upgrades through the Weatherization Assistance Program, since they were Low Income Energy Assistance Program (LEAP) clients.

"I always thought my house wouldn't qualify," Jerry said, as he and Shirley were under the assumption that energy efficiency help was just for people with old or poorly built houses. However, after learning about the program, they contacted Housing Resources of Western Colorado (HRWC) to schedule a free home energy audit. The audit revealed cost effective measures to improve the overall energy efficiency and comfort of the home.

The HRWC crew installed new insulation in the walls, mounted carbon monoxide detectors, installed energy efficient light bulbs, and replaced a 20-year old refrigerator with one that was smaller and more efficient.

Prior to receiving weatherization services, utility bills could add up to nearly $1,300 annually. With the energy upgrades, the couple expects to save an average of $275, 110 therms of gas, and 645 kilowatt hours of electricity each year.

"It was eye opening, and very much appreciated," Jerry said. "I'm not one to want to live off help, but what they did were things that I'm not able to afford to change."



May 4, 2015

Housing Resources of Western Colorado
242 West Main, #1
Montrose, CO 81401

Dear Debra and Crew,

We want to thank all of you for the nice job you did on our home with all of the upgrades to make our home safer and more energy efficient.

Everyone was very professional and helpful and answered our questions on a level that we could understand. We were very glad to get the information about the CO2 detectors and where to place them. We have already passed this information on to other people who are unaware that they should be down low.

We are on Social Security so everything you did to our home to make it more energy efficient will definitely help us to make our energy dollars go further. Every penny saved is a lot to us.

We are really excited to be able to save money and be more comfortable all year long. We hope this program will keep going so more people can take advantage of this weatherization program. It is a great program.

Thank you, too, for the gift card for doing the TV interview. We went and got more LED light bulbs with the money so we can save even more money.

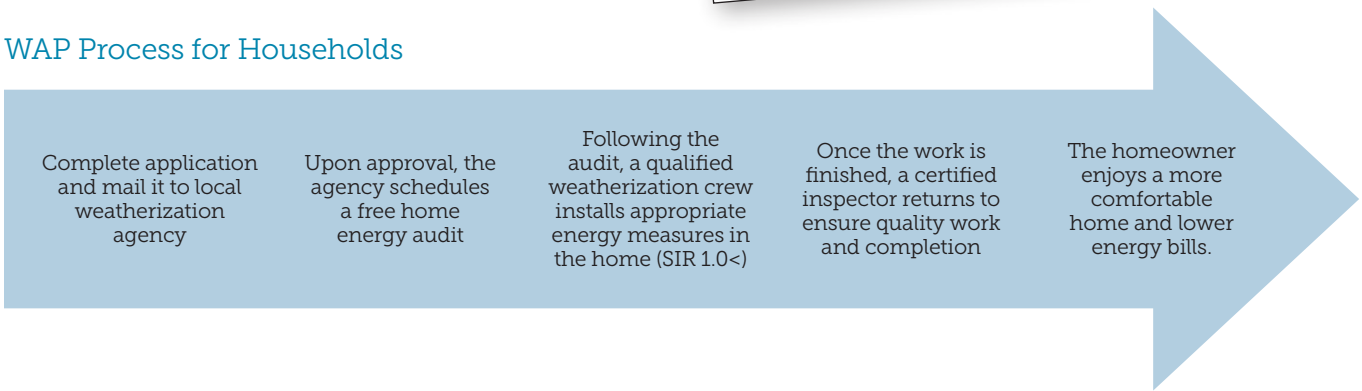
Thank you again. You have a great crew that does the weatherization program from Debra in the office to the guys who do the work. Great job everyone! Keep up the good work.

Sincerely,

Jerry and Shirley Lehl

Jerry and Shirley Lehl

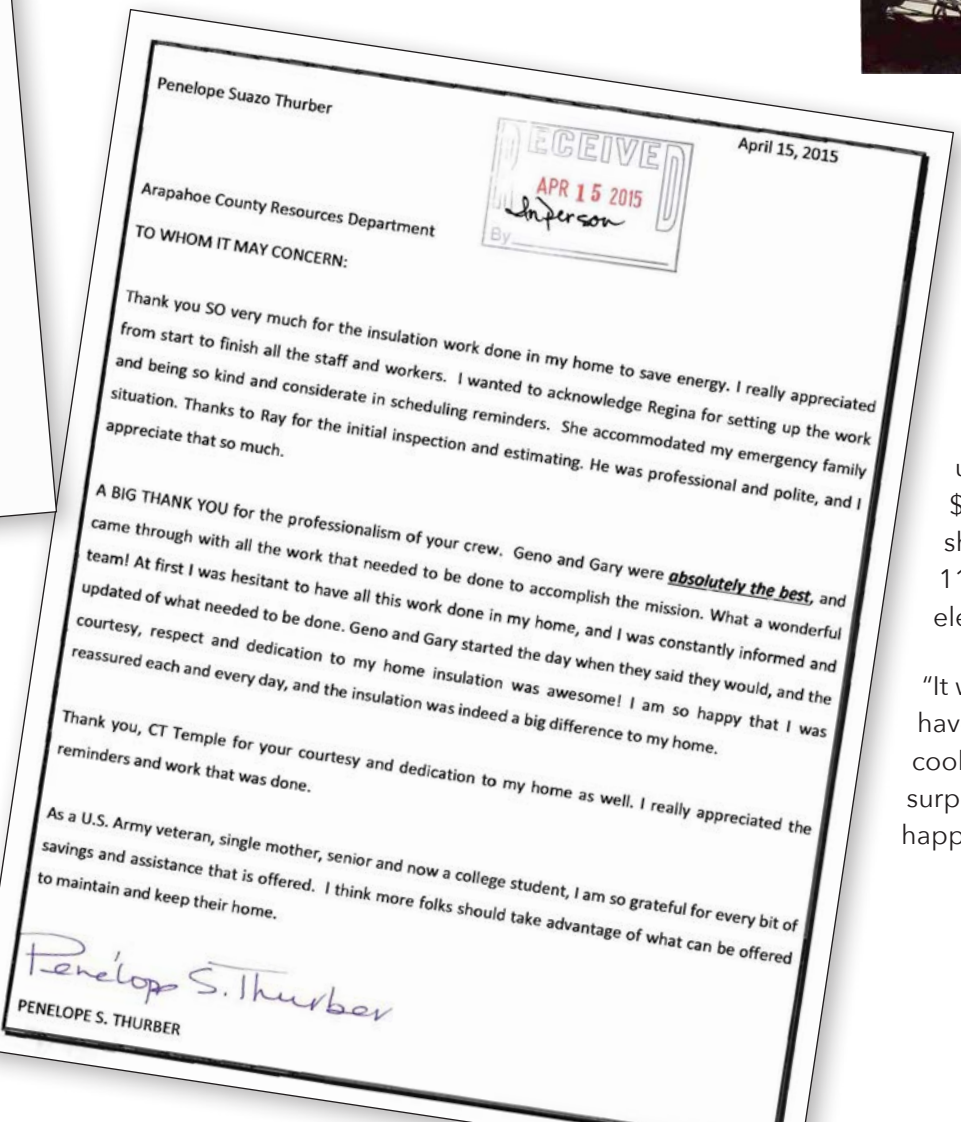
WAP Process for Households



PROGRAM HIGHLIGHT: Penelope Suazo Thurber

Penelope Suazo Thurber is a 61-year old Army veteran and single mother with a teenage daughter. She has lived in a three-bedroom ranch style home, that was built in 1963, for the past 19 years. Although she had taken good care of her home over the years, she wasn't able to afford major changes to make the home more energy efficient.

When Thurber learned that she qualified for free energy efficiency upgrades through the Weatherization Assistance Program, she contacted the Arapahoe County Weatherization Division, which is a Colorado Energy Office Weatherization program contractor, to schedule a home energy audit. The audit revealed a number of cost effective measures that could be installed in Thurber's home to make a difference.



Penelope Suazo Thurber

April 15, 2015

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APR 15 2015
In person
By

Arapahoe County Resources Department

TO WHOM IT MAY CONCERN:

Thank you SO very much for the insulation work done in my home to save energy. I really appreciated from start to finish all the staff and workers. I wanted to acknowledge Regina for setting up the work and being so kind and considerate in scheduling reminders. She accommodated my emergency family situation. Thanks to Ray for the initial inspection and estimating. He was professional and polite, and I appreciate that so much.

A BIG THANK YOU for the professionalism of your crew. Geno and Gary were ***absolutely the best***, and came through with all the work that needed to be done to accomplish the mission. What a wonderful team! At first I was hesitant to have all this work done in my home, and I was constantly informed and updated of what needed to be done. Geno and Gary started the day when they said they would, and the courtesy, respect and dedication to my home insulation was awesome! I am so happy that I was reassured each and every day, and the insulation was indeed a big difference to my home.

Thank you, CT Temple for your courtesy and dedication to my home as well. I really appreciated the reminders and work that was done.

As a U.S. Army veteran, single mother, senior and now a college student, I am so grateful for every bit of savings and assistance that is offered. I think more folks should take advantage of what can be offered to maintain and keep their home.

Penelope S. Thurber

PENELOPE S. THURBER

After assessing Thurber's home, the crew from Arapahoe County installed insulation in the walls, attic, and crawl space, sealed two doorways, and wrapped the water heater. Thurber was also supplied with low-flow showerheads and energy efficient light bulbs.

Prior to receiving weatherization services, utility costs could amount to upward of $1,500 annually. With the energy upgrades, she expects to save approximately $225, 110 therms of gas, and 645 kilowatt hours of electricity each year.

"It was a big difference," she said. "I don't have air conditioning, but the house was even cooler this summer after their work. What a surprise. I would recommend it. I was really happy that they did it. It was an awesome crew."

26 Policy & Legislative Summary

POLICY & LEGISLATIVE SUMMARY

During the 2015 legislative session, the Colorado Energy Office (CEO) monitored and analyzed a wide range of bills relating to electric utilities, energy efficiency, renewable energy, and alternative fuel transportation. Notably, this included working closely with the Colorado Rural Electric Association and Colorado Association of Municipal Utilities to pass bills focused on ensuring that their member utilities have reasonable compliance pathways to meet the state's renewable energy standard. CEO's efforts also focused on legislation to streamline regulation, including those impacting hydroelectric and community solar installations, as well as the administration of propane autogas taxation. The following highlights CEO's work to provide technical guidance, analysis, and policy support to help these bills pass in a bipartisan manner.

SB15-46

Sponsors: Sen. Kevin Grantham/Rep. Dominick Moreno

As part of Colorado's renewable energy standard, cooperative electric associations must generate a portion of their annual electricity sales from local distributed generation. This also includes a customer-sited generation requirement called retail distributed generation. Passing unanimously from both chambers, this bill allows generation from community solar to be used meet the retail distributed generation requirement, and provides more flexibility for cooperatives with large industrial loads.

HB15-1377

Sponsors: Reps. Dominick Moreno & Jon Becker/
Sens. Kevin Grantham & Kerry Donovan

In order to be inclusive of all renewable resources and provide more compliance options for cooperative electric associations to meet their retail distributed generation requirements, this bill allows any renewable resource to be used in a community renewable facility similar to the community solar garden model. Both chambers passed the bill unanimously.

HB15-1284

Sponsors: Reps. Faith Winter & Catherine Roupe/
Sens. Kevin Grantham & Mary Hodge

Community solar gardens allow customers to purchase a subscription to a community-scale solar array instead of having to install solar panels directly on their property. This bill removed the limitations for operators of community solar gardens to only sell across county lines based on certain population requirements. Now subscriptions can be sold across county lines as long as those customers are within the same utility service territory.

HB15-1364

Sponsors: Reps. Don Coram & Diane Mitsch Bush/
Sens. Jerry Sonnenberg & Kerry Donovan

This bill streamlined the permitting for both small inverter-based and induction-based hydroelectric energy facilities so that they now will have a less onerous and more affordable option to meet their electrical permitting requirements. Both chambers passed the bill unanimously.

HB15-1228

Sponsors: Reps. Diane Mitsch Bush & Jon Becker/
Sen. Ray Scott

While propane is used mainly for heating in Colorado, propane autogas is an alternative fuel source that represents a smaller portion of the state's propane use. Rather than tax all propane at the distribution level, this bill allows propane to be taxed when it is injected into a vehicle's tank. This will limit the financial burden for distributors, and remove a process of collecting and then remitting the tax from fuel sales not being used for autogas. It also removes the minimum bond threshold placed on propane distributors, which was disproportionately high for the volume of autogas sales. Both chambers passed the bill unanimously.

PROGRAM HIGHLIGHT: Hydropower Partnership Project

In 2015, the Colorado Energy Office (CEO) partnered with the Colorado Department of Agriculture (CDA) to launch the Hydropower Partnership Project through the U.S. Department of Agriculture's (USDA) Regional Conservation Partnership Program (RCPP). The project presented a significant opportunity to improve both water and energy conservation.

The new program is designed to facilitate the development of low-impact small hydropower on new and existing pressurized irrigation systems. In addition, the program promotes the conversion of flood-irrigated fields to sprinkler irrigation with integrated hydropower to promote water conservation, while preserving the irrigator's full water rights. The project aims to install 30 integrated hydromechanical or hydroelectric power systems across Colorado over four years.

CEO played a key role in the development phase of this new initiative. While updating the 2015 Colorado Small Hydropower Handbook, a new Agricultural Hydropower Technical Training Manual was created. This training manual is a step-by-step guide to developing hydromechanical/hydropower systems in agriculture operations.

Following the training manual creation, CEO and CDA conducted two training workshops for Natural Resources Conservation Services (NRCS) engineers and utility stakeholders. NRCS engineers regularly work with water users and agriculture producers across Colorado. Stakeholders gained knowledge on how to identify, research, plan, and implement a small hydropower system or hydromechanical system. The 65 people who attended the training workshops will help support the Hydropower Partnership Project's goals. The project offers a significant opportunity for CEO to work closely with agency partners to create change that will have positive impacts in the agriculture industry and rural communities.

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