

Colorado Energy Office

2017/2018 [FY2018] Annual Report



COLORADO
Energy Office



Letter from the Executive Director



During the 2018 legislative session, the Colorado Energy Office (CEO) worked with the Governor's Office and built bi-partisan support in both legislative chambers to include a budget line in the Long Bill, securing funding for the office long-term. Moving forward, CEO will

now have a consistent General Fund base budget included as a line item in the State budget for our programming each year. This success would not have been possible without the ongoing support of our partners and the willingness of key legislators from both chambers—and both parties—to work with us to identify a sustainable path forward for the office.

In addition to the Long Bill, the General Assembly passed SB18-003. This bi-partisan bill primarily repealed inactive programs from statute. Rather than limiting CEO's work in any particular market sector, this bill provides additional flexibility to evolve existing programs and develop new program offerings to meet the needs of Coloradans. The bill also added new energy technologies and resources to a non-exhaustive statutory list of Colorado's energy sources. Overall, this flexibility allows us to identify opportunities to help advance new energy technologies for the benefit of our citizens.

CEO's statutory mission is broad, including but not limited to, promoting all forms of Colorado energy, protecting the environment and economic development. In order to focus the work we do, CEO's program mission is "to deliver cost-effective energy services and advance innovative energy solutions for the benefit of all Coloradans."

Our work focuses on both reducing energy costs for consumers and supporting innovative energy projects that result in additional clean, affordable, and accessible energy options.

Building on partnerships and relationships we developed and fostered in FY 2017, CEO solidified a strong foundation through securing state funding, thorough strategic planning and program execution in fiscal year 2018. Notable successes include delivering the Colorado Electric Vehicle Plan to the Governor in January that sets goals and strategies to electrify Colorado's corridors and increase adoption of electric vehicles across the state; launching the Residential Energy Upgrade Loan (RENU) program that makes financing for energy efficiency and renewable energy improvements available to a broader sector of residential customers; and developing strategies for the continued evolution of our commercial and industrial energy services programs—building on the successful identification of energy savings opportunities and focusing on implementation of projects through financing, behavioral management and education. CEO is poised to close out the Hickenlooper Administration with strong footing and momentum, and ready to kick off the start of the Polis Administration by building on our program and relationship successes and growing the benefits and impacts to the citizens of Colorado.

I am excited about the future of the Colorado Energy Office and the opportunities to work with all of our energy stakeholders on programs and projects that benefit Coloradans. Thank you for your support and work with us over the years. We look forward to continuing and growing that work in the coming year.

A handwritten signature in blue ink, which appears to read "Kathleen Staks". The signature is fluid and cursive.

Kathleen Staks

Colorado Energy Office

Mission & Vision

MISSION

To deliver cost-effective energy services and advance innovative energy solutions for the benefit of all Coloradans.



VISION

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.

As Colorado's population expands from 5 million to an expected 8.1 million by 2040, energy demand and consumption will also continue to grow. Capitalizing on the state's diverse natural resources, innovative technology institutions, and long-standing energy efficiency programs, the Colorado Energy Office (CEO) works to increase the affordability and accessibility of clean energy for all Coloradans.

During fiscal year 2017-2018, CEO conducted a thorough restructuring process to more effectively align its services and program offerings with its customer and stakeholder segments. CEO is now comprised of five units designed to deliver cost-effective energy services and solutions: Transportation Fuels & Technology, Commercial & Industrial Energy Services, Residential Energy Services, Public Affairs and Operations.

Transportation Fuels & Technology

Transportation accounts for 30% of total greenhouse gas emissions in Colorado. To reduce emissions in this sector and meet the needs of today's motoring public and fleets, CEO's Transportation Fuels & Technology unit works to accelerate the use of market-ready and emerging alternative transportation fuels and technologies. To help support a transition to alternative fuels, CEO administers a number of grant programs that reduce the costs of installing alternative fuel vehicle fueling and charging stations. This infrastructure helps reduce range anxiety, one of the major barriers to adopting new transportation technologies. The Transportation Fuels & Technology unit also conducts outreach to educate fleet managers, local governments and consumers about the benefits and incentives associated with alternative fuel vehicles.



Commercial & Industrial Energy Services

The commercial and industrial sector in Colorado accounts for almost 50% of total energy consumption in the state. CEO's Commercial & Industrial Energy Services unit provides comprehensive energy services to reduce energy consumption and lower energy costs for commercial and industrial facilities across Colorado including agricultural operations, schools and public buildings. CEO executes programs, research, and behavioral studies that drive energy cost savings. CEO also educates school administrators and industrial users about the benefits of energy management programs. The Commercial & Industrial Energy Services unit also supports agricultural producers and public sector entities seeking to implement improvement projects that reduce energy-related costs and provide environmental benefits. Support from CEO includes technical analysis and assistance, coordination of incentives, facilitation of financing, and project implementation.



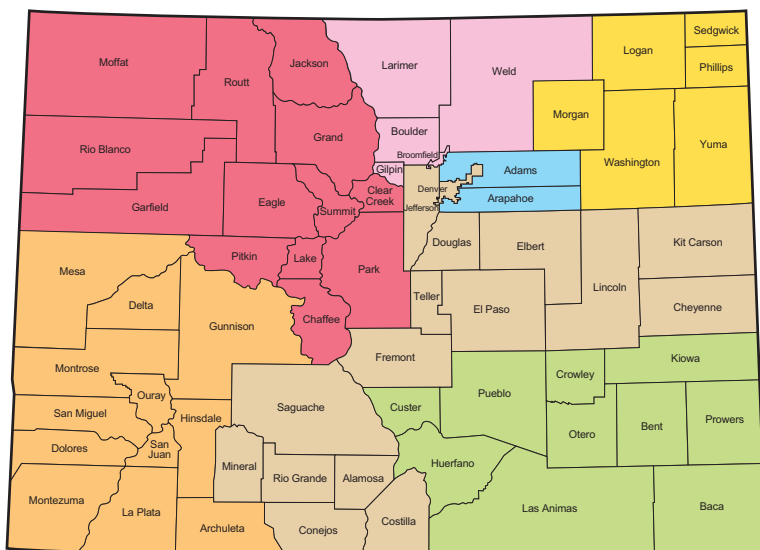
Residential Energy Services

Colorado’s residential sector represents approximately 23% of the state’s total energy consumption. While energy costs are relatively low on average across Colorado, there is still a segment of the population whose energy expenditures are a disproportionately high percentage of their living costs. Approximately 30 percent of Colorado households—many located in rural areas—are considered energy burdened, paying 4 percent of household income on utility bills. Of this 30 percent, 11 percent are considered energy impoverished, paying more than 10 percent of household income on utility bills. Residential energy consumption also contributes to greenhouse gas emissions and air pollution, both of which generate social and environmental costs as well.



The Residential Energy Services unit provides comprehensive energy services to reduce energy consumption and lower energy costs for households throughout all 64 counties of Colorado. For Colorado’s low income residences—households meeting an annual income requirement or 200% or less of the federal poverty level, CEO utilizes federal, state and utility funding to provide weatherization services through contracted providers. The Residential Energy Services unit coordinates funding sources, establishes performance standards, conducts technical and administrative training, and performs compliance reviews of those weatherization service providers to ensure compliance with federal and state requirements and to ensure the highest quality services to those customers. For residential households across the income spectrum, CEO increases access to energy efficiency and renewable energy improvements by facilitating financing through public-private partnerships and training local jurisdictions to encourage adoption of more efficient building codes.

WEATHERIZATION SERVICE PROVIDERS



- **Arapahoe County Weatherization Division**
303-636-1982 | www.co.arapahoe.co.us
- **Energy Outreach Colorado (EOC)**
303-226-5069 | www.energyoutreach.org
[EOC serves multifamily residence buildings statewide]
- **Energy Resource Center**
719-591-0772 | Central Colorado
720-236-1321 | Denver
719-587-9492 | San Luis Valley
www.erc-co.org
- **Energy Resource Center—Loveland**
970-617-2801 | www.erc-co.org
- **Housing Resources of Western Colorado**
970-241-2871 | www.hrwco.org
- **Northwest Colorado Council of Governments**
1-800-332-3669 | www.nwccog.org
- **Northeast Colorado**
303-866-2230 | www.colorado.gov/energyoffice
- **Pueblo County Department of Housing and Human Services**
719-583-6315 | <http://county.pueblo.org>

Public Affairs

CEO's Public Affairs unit manages strategic communications and outreach efforts, conducts research, provides public information, and implements policy and regulatory work in support of the office's mission. This unit works on utility scale electricity generation, transmission, and energy production issues; engages with the General Assembly on energy-related legislation; and participates in proceedings at the Public Utilities Commission. The Public Affairs team also works with each of the office's units to implement sector-specific policy and communications initiatives. To most effectively deliver informed policy frameworks and recommendations to the Governor, lawmakers, regulators, and the public, the unit develops strategic partnerships with stakeholders across all Colorado energy sectors.



Operations

The Operations unit is responsible for the fiduciary integrity of the office and creates internal processes that ensure efficient, effective and elegant operations. This unit is responsible for overseeing CEO's accounting and budget functions to ensure the office continues to prudently manage taxpayer dollars. The Operations unit is also responsible for designing and facilitating CEO's strategic planning process and refining internal and external policies and procedures.



Notable Accomplishments

- ▶ CEO announced the state's first agricultural project funded through Colorado's Commercial Property Assessed Clean Energy (C-PACE) program. Ela Family Farms, a Hotchkiss-based certified organic orchard, used C-PACE financing to install a new solar photovoltaic system at its warehouse. Along with producing renewable energy, the installment is projected to save the fourth-generation orchard more than \$113,000 in energy costs over the system's lifetime. This project demonstrated the ability to use C-PACE for small rural projects and expanded program applicability to communities in all areas of the state.
- ▶ CEO, the Regional Air Quality Council, the Colorado Department of Public Health and Environment, and the Colorado Department of Transportation released the Colorado Electric Vehicle Plan in support of Governor Hickenlooper's Executive Order "Supporting Colorado's Clean Energy Transition." Created with broad stakeholder engagement and support, the plan sets forth a series of actions to electrify Colorado's corridors. Collaboration among public and private sectors to achieve the plan's goals will help ensure the health, economic and environmental benefits that come with widespread adoption of EVs.
- ▶ ALT Fuels Colorado launched the first grant offering that specifically funds EV fast-charging stations along Colorado's major transportation corridors. CEO will award grants to public and private entities to build charging stations across 1,700 miles along six corridors, directly addressing Action #1 in the Colorado Electric Vehicle Plan.
- ▶ CEO launched the Colorado Residential Energy Upgrade (RENU) Loan, a statewide residential loan program aimed at financing energy efficiency and renewable energy projects for existing homes. By the end of the fiscal year, the RENU Loan program closed 38 loans for homeowners in 14 counties with a combined financed value of \$557,000.
- ▶ The Colorado Energy Performance Contracting (EPC) program signed 14 MOUs with municipal and county jurisdictions including Denver International Airport, the Town of Walden, Pueblo 70 School District, Haxtun School District and the City of Trinidad. During this fiscal year, EPC secured more than \$28 million in facility improvement investment, upgraded 83.1 million square feet and guaranteed \$34.2 million in annual utility cost savings.
- ▶ In fiscal year 2018, the Colorado Weatherization Assistance Program (WAP) weatherized 2,000 residential units which included installing 23,000 LED light bulbs, 100 rooftop solar PV systems and 560 high efficiency furnaces, resulting in an estimated \$650,000 in annual energy bill savings for low-income Coloradan households.
- ▶ In partnership with the U.S. Department of Agriculture's Natural Resources Conservation Service and the Colorado Department of Agriculture, CEO released a total of \$820,000 in project assistance funds for implementation of agricultural energy efficiency and renewable energy projects. The funding is open to Colorado agricultural irrigators, dairies, greenhouses, nurseries and cold storage facilities enrolled in CEO's Agricultural Energy Efficiency program.
- ▶ CEO and the Utah Governor's Office of Energy Development launched the "Western States Rural Natural Gas Initiative," entering into a memorandum of understanding (MOU) for Colorado and Utah to work together to identify opportunities that will further rural economic development, infrastructure and export opportunities, and shared innovative technologies for our western natural gas resources.
- ▶ CEO piloted the Nest Learning Thermostat within the Colorado Weatherization Assistance Program (WAP) for the Nest Power Project. For the pilot, WAP service provider Arapahoe County Weatherization tested incremental energy savings potential from the installation of Nest Learning Thermostats as part of its low-income weatherization efforts. The data collected from the pilot highlighted valuable data that will be used for future WAP programming refinement, including an achievement of 9% savings of natural gas for home heating.

Success Snapshots

1 Electric Vehicles in Colorado—REV West Memorandum of Understanding and the Colorado Electric Vehicle Plan

The State of Colorado is rapidly emerging as a leader in the U.S. electric vehicle (EV) market. In 2011, there were just 20 EVs registered in Colorado; as of July 2017, there were 10,930. In addition to federal incentives currently available, Colorado adopted bipartisan-supported tax credits for the purchase, lease and fleet conversion of light, medium and heavy duty alternative-fueled vehicles including EVs. Despite the growth in Colorado’s EV market, lack of publicly accessible charging remains a major barrier. Consumers are apprehensive about the availability of public EV charging, both as local, community-based stations and fast-charging stations along major transportation corridors.



In October 2017, Governor Hickenlooper led the signing of a memorandum of understanding (MOU) with seven other western states—Arizona, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. The Regional Electric Vehicle West (REV West) MOU provides a framework to work together toward collective EV goals, and signatory states represent a mix of Democrat and Republican governors. This framework is an example of the innovation and bipartisan collaboration happening around energy in the West.

In January 2018, CEO, the Regional Air Quality Council, the Colorado Department of Public Health and Environment, and the Colorado Department of Transportation released the Colorado Electric Vehicle Plan in support of Governor Hickenlooper’s Executive Order “Supporting Colorado’s Clean Energy Transition.” The plan sets forth a series of actions and strategies to electrify Colorado’s corridors while ensuring the health, economic and environmental benefits that come with widespread adoption of EVs are achieved.





2 Residential Energy Upgrade (RENU) Loan Program Launch

In February 2018, CEO launched the Colorado Residential Energy Upgrade (RENU) Loan, a statewide residential loan program aimed at financing energy efficiency and renewable energy projects for existing homes. The RENU Loan program, a partnership between CEO and Boulder-based Elevations Credit Union, offers long-term, low interest rate loans to Colorado homeowners seeking to improve the energy efficiency and comfort of their homes.

With the RENU Loan—and by working with RENU-authorized contractors—homeowners are able to replace aging or broken equipment such as an air conditioner, water heater or furnace. By taking advantage of an easy loan and project approval process, homeowners can also finance the installation of a solar energy system.

During fiscal year 2018, the RENU Loan program closed 38 loans with a combined financed value of \$557,000. During this time period, 35 homeowners in 14 counties participated in the program, and 61 contractors became RENU-authorized contractors.

About the RENU Loan

- ▶ Finance 100% of project costs
- ▶ Loans are available from \$500 to \$35,000 up to 15-year terms
- ▶ Interest rates start at 2.75% for FICO scores of 740+ and a 3-year term
- ▶ Borrowers approved with credit scores as low as 580
- ▶ There are no prepayment penalties
- ▶ Nominal loan fees
- ▶ No cost re-amortization with a principal payment of \$1,000 or more

3 Colorado Commercial Property-Assessed Clean Energy (C-PACE)

Colorado's Commercial Property-Assessed Clean Energy (C-PACE) program enables owners of eligible commercial and industrial buildings to finance up to 100% of energy efficiency, renewable energy, and water conservation eligible improvements. C-PACE program design allows for project size diversity from small to large in both urban and rural settings. Financing is provided by private capital providers at competitive rates with repayment terms up to 25 years.

With C-PACE, building owners are empowered to modernize building energy infrastructure, lower energy costs, and increase building comfort and asset value with the ability to see positive cash flow and no upfront costs. C-PACE projects also advance public policy goals to create local jobs, reduce greenhouse gas emissions and increase renewable energy deployment.

C-PACE financing repayment is facilitated through the county property tax assessment process. A voluntary assessment (similar to a sewer district assessment) is placed on the building owner's property tax bill. The assessment is repaid over the financing term (up to 25 years) and the annual energy cost savings will, in most cases, exceed the annual assessment payment, thereby enabling capital intensive equipment upgrades. Because the C-PACE assessment obligation runs with the property, the assessment can transfer to the next owner when the property is sold.

In January 2018, Colorado C-PACE announced the state's first agricultural project funded through the program. Ela Family Farms, a Hotchkiss-based certified organic orchard, will use C-PACE financing to install a new solar photovoltaic system at its warehouse. Along with producing renewable energy, the installment is projected to save the fourth-generation orchard more than \$113,000 in energy costs over the system's lifetime.

By the end of fiscal year 2018, the total amount of C-PACE project financing was \$19.4 million, with 21 signatory counties covering approximately 71% of the targeted commercial building stock as active C-PACE markets.







COLORADO

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