

Colorado Energy Office Q4 FY2017 Performance Evaluation (July 2017)

Strategic Policy Initiatives: The Colorado Energy Office (CEO) identified several strategic policy initiatives for FY 2016-17 and beyond. For this performance evaluation, the Department has updated progress on the initiatives identified in the FY 2017 Performance Plan that capture the Department's strategic and operational priorities, and reflect the overall direction as identified by Department leadership. The updates reflect data as of July 1, 2017. Additional detail for these and other strategic policy initiatives is available in the Department's Performance Plan, which may be accessed [here](#).

Transportation Sector: Alternative-Fuel Vehicles

Colorado plans to increase the adoption of alternative fuel vehicles including compressed natural gas and electric. With Colorado's rich abundance of natural gas and citizens who value the preservation of the environment, Coloradans want the opportunity to make choices that can benefit both the economic and environmental health of the state.

SPI 1: Increase the sales of compressed natural gas (CNG) fuel by 500% from 2.5 million gasoline gallon equivalents (GGEs) per year in 2013 to 13 million GGEs per year by June 30, 2018, and increase the electric vehicle (EV) market share for new light duty vehicles sold in Colorado from 0.62% in 2013 to 2.3% by June 30, 2018, diversifying transportation fuel use for all Coloradans.

Progress: Progress Outcome:

CNG: CNG fuel sales in Colorado increased from 5,815,863 GGEs in 2015 to 8,221,186 GGEs in 2016. CNG fuel sales for the first quarter of 2017 totaled 2,447,382 GGEs. (Data source: DOR)

EV: Colorado has an estimated 8,138 EVs in the state for 2016, increasing new light duty vehicles sold in Colorado from 0.9% in 2015 to 1.2% in 2016. (Data source: DOR and Polk)

CEO's strategy to remove market barriers to alternative fuel adoption is to increase the number of publicly accessible alternative fueling stations along Colorado's major transportation corridors. This will reduce Coloradans' concerns about the driving distance from one station to another and increase the likelihood of alternative fuel vehicle purchases. Through two grant programs, Colorado is incentivizing the market with infrastructure grants. CEO is conducting grant opportunities that will attract a pool of qualified applicants. With designated federal and state dollars, CEO is making awards to install new CNG fueling and EV charging stations and will monitor and evaluate progress through the state's

contract standards.

CEO is focused on specific geographical areas to complete CNG transportation corridor infrastructure. Due to the relatively low gas and diesel prices, the program continues to see significant caution with CNG infrastructure investment. CEO continues to adapt to these market forces and may make more adjustments to its ALT Fuels Colorado program. Effective January 2017, new legislation gave consumers point of purchase tax credit savings for alternative fuel vehicles, providing more incentive to purchase these vehicles.

Buildings/Facilities Sector: Energy Efficiency and On-Site Clean Generation

Energy efficiency is an integral part of the state's economic and environmental health. Inefficient energy usage affects overhead costs for consumers and businesses. It also has an impact on the quality of the air. Reducing energy use reduces carbon emissions. When consumers and businesses invest dollars to save on energy usage, they not only see immediate utility savings, they can increase the comfort of their homes and the value of their properties.

SPI 2: Increase energy savings resulting from CEO's direct energy efficiency projects by 14.6% from a goal of 151,265 MMBtu in FY16 to at least 173,378 MMBtu by June 30, 2018.

CEO's direct energy efficiency projects including the following programs will result in energy savings: 1) agricultural energy efficiency; 2) Energy Savings for Schools; 3) energy performance contracting for public buildings; and 4) weatherization assistance. Progress data is captured on an annual basis.

Progress Outcome: Direct savings from CEO's energy efficiency programs was 78,409 MMBtus in FY 2017. (Weatherization savings are 16,000 MMBtus). The energy savings for CEO's energy efficiency projects were lower than expected due to two key factors. The Energy Performance Contracting program provides the largest portion of potential energy savings and the EPC program did not secure large projects this fiscal year. EPC project agreements (MOUs) are typically more challenging to secure due to the large scope and often complexity of the projects. Additionally, there is a lag time between energy audits and the implementation of energy savings measures. (Data source: CEO contractor attested energy audits) Progress data is captured annually.

SPI 3: Decrease Colorado’s average annual residential energy use by 5% from 91 MMBTU in 2012 to 86 MMBTU by June 30, 2018.

Progress Outcome:

According to data from the U.S. Energy Information Administration, Colorado’s average annual residential energy use was 91 MMBtu in 2012, increased to 102 MMBtu in 2013, fell to 99 MMBtu in 2014, and declined further to 93 MMBtu in 2015. (Data Source: EIA with Colorado State Demographer)

Note: CEO has assessed this SPI metric and will not continue to use this metric in FY18. CEO will continue to work within the residential sector and educate about the value of home rating systems.

CEO’s strategies to reduce energy use in the residential sector include integrating home rating systems into the home building process as well as the buying and selling process, making it easier for consumers and realtors to compare and understand energy efficiency features. Through outreach and training, CEO works with real estate industry stakeholders to use and promote the Home Energy Score rating tool. In FY17, CEO coordinated with the weatherization assistance program to include a portion of scores for weatherized homes. CEO worked with 12 jurisdictions to adopt 2015 International Energy Conservation Code. A house built under the 2015 code is nearly 40% more efficient than one built under 2006.

SPI 4: Reduce the amount of household income expended by low-income households on energy from a baseline reduction in 2013 of 1.0%, on average, to a reduction of 1.5% by June 30, 2018.

Please note that CEO is modifying this SPI to reflect clearer language in FY18: Increase average low-income household energy cost savings by 50% from \$200 in 2013 to \$300 by June 30, 2018.

Progress Outcome: In partnership with the Colorado Department of Human Services and the U.S. Department of Energy, CEO contracts with local agencies to provide economically disadvantaged residents access to cost-effective improvements that will reduce their energy usage and improve the comfort of their homes. In FY 2017, the program saved 40,440 MMBTUs and achieved a .3% reduction of income expended on energy by low-income households; from 1.2 to 1.5%. Progress is captured on an annual basis. The next update will be at the end of FY 2018.

To achieve these goals, CEO is contracting with external vendors and agencies to perform energy audits, ratings, trainings and retrofits and solar installation. CEO is monitoring and evaluating progress through the state’s contract standards. CEO is conducting presentations and trainings to

Publicly accessible compressed natural gas fueling stations awarded	N/A	N/A	11	4	0	0	0	0	0	6	5
Number of CNG gallon equivalents committed to by fleet owners in awarded CNG station proposals	N/A	N/A	1,995,164	1,441,399	0	0	0	0	0	175,000	175,000
Percent of contracts issued within 30 days after awarded	N/A	N/A	100%	100%	N/A	N/A	N/A	N/A	N/A	100%	100%
Electric vehicle charging stations awarded outside of Denver Metro	17	17	42	51	4	7	20	-1	30	18	20
Number of proposed stations	N/A	N/A	30	30	18	10	62	0	90	40	40
Number of EV Wired Workplace events	N/A	N/A	N/A	4	1	0	0	3	4	12	12
Number funding rounds through RFAs	1	3	3	3	1	1	1	0	3	3	3
Percent of purchase orders issued within 30 days after awarded	N/A	N/A	100%	82%	100%	83%	N/A	90%	91%	100%	100%

Note: The 3-year goal is a projected annual goal, not a cumulative goal.

CEO is focused on specific geographical areas to complete CNG transportation corridor infrastructure. These areas include Metro Denver, Ft. Collins, and I-70 west of Denver. In addition, to provide greater flexibility for potential developers, the program extended a rolling grant period. Due to the relatively low gas and diesel prices, the program continues to see significant caution with CNG infrastructure investment; however, several proposals for new stations and station renovations are expected by end of the calendar year. CEO continues to adapt to these market forces and may make more adjustments to its ALT Fuels Colorado program, while also working more closely with developers and key community stakeholders in the areas noted above. Additionally, the technical fleet analysis available through Refuel Colorado was recently updated to deliver more timely and concise information on investment opportunities for alternative fuels to local fleets, potentially leading to greater local demand for CNG fueling infrastructure. Effective January 2017, new legislation gave consumers point-of-

purchase tax credit savings for alternative fuel vehicles, which provides more incentive to purchase these vehicles.

Charge Ahead Colorado grant awards are made three times a year. The first two funding rounds for FY16-17 received 13 applications for 28 stations. Of the 13 awarded stations, two were recently declined due to a special permitting requirement for one and a change in investor for another. In addition, a FY 2016 award for two stations was terminated due to the recipient’s inability to initiate the project. In March 2017, CEO received 18 proposals for 62 stations. After review, 28 stations awards were issued, bringing the total number of awarded stations for the fiscal year to 39. Two awardees did not accept their awards for 9 stations. The final total the total number of stations awarded is 30, exceeding the annual goal of 18. In FY17-18, CEO will focus efforts on workplace charging since most people with EVs will charge their vehicles at home or work. CEO is working with its Refuel Colorado fleet coaches to target identified companies. CEO finishes the year behind on its EV Wired Workplace events. CEO will continue to promote the use of workplace charging as national data indicate that employees are six times more likely to purchase an EV at organizations with charging stations.

SPI 2: Energy Efficiency and On-Site Clean Generation – Energy Savings resulting from CEO’s direct energy efficiency projects

**Major Program Area – Programs and Initiatives
Process – Energy audits and presentation and MOU execution**

Measure	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	Q1 FY17	Q2 FY17	Q3 FY17	Q4 FY17	FY17 Total	1-Year Goal	3-Year Goal
Energy audits performed for Colorado producers	N/A	N/A	12	64	0	18	19	23	60	60	60
Number of applications received for Colorado Agricultural Energy Efficiency Program	N/A	N/A	N/A	84	5	36	14	16	71	70	70
Partner contributions leveraged from CEO's Regional Conservation Partnership Program partners	N/A	N/A	N/A	N/A	\$5,000	\$250,000	\$0	\$20,000	\$275,000	\$275,000	\$275,000
EPC MOUs	N/A	N/A	9	7	0	3	1	1	5	12	12
Number of preliminary presentations before MOUs	N/A	N/A	19	17	7	2	8	14	31	24	48

ESS MOUs	N/A	N/A	4	21	2	5	8	3	18	18	18
Number of preliminary presentations before MOUs	N/A	N/A	24	31	4	16	6	5	31	24	48

Note: The 3-year goal is a projected annual goal, not a cumulative goal.

CEO's Agricultural Energy Efficiency Program met its goal of 60 audits. Due to the aggressive outreach conducted this year, six are on the waiting list for FY 2018. To date, 26 producers have implemented projects saving nearly 1,400 MMBtu per year. Another 36 producers are in the process of implementing improvements. The ESS Program met its annual MOU goal, and EPC fell short. EPC MOUs are typically more challenging to secure due to the large scope and often complexity of the projects. CEO staff has been working closely with its pre-qualified energy service companies to work with identified jurisdictions.

SPI 3: Energy Efficiency and On-Site Clean Generation – Residential Energy Use

Major Program Area – Programs and Initiatives Process – Training, technical assistance and recruitment

Measure	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	Q1 FY17	Q2 FY17	Q3 FY17	Q4 FY17	FY17 Total	1-Year Goal	3-Year Goal
Home Energy Scores completed	N/A	N/A	N/A	851	380	309	376	4,067	5,132	6,000	6,000
Number of real estate stakeholders that successfully completed training	579	1063	1242	1470	0	9	44	84	137	*1,500	150
Number of qualified assessors recruited	N/A	N/A	N/A	59	10	0	3	1	14	60	60
Increase the percentage of new homes in targeted areas (Colorado Springs and Grand Junction) with a HERS score from 14% in	N/A	N/A	N/A	N/A	14.11%YTD	14.70%YTD	13.71%YTD	14.89%YTD	15.03%YTD	17%YTD	-

2015 to 17% in 2017											
New homes sold with a Home Energy Rating System Index rating	N/A	6,784	8,385	8,832	2,656	2,769	2,189	2,586	10,200	9,000	12,000
Number of jurisdictions considering adopting the 2015 International Energy Conservation Code that receive training and technical assistance	N/A	N/A	N/A	N/A	0	2	6	4	12	7	7
Number of 2015 IECC, HERS, and builder technical trainings	N/A	42	67	76	0	6	17	25	48	30	30

Note: The 3-year goal is a projected annual goal, not a cumulative goal.

CEO substantially increased the number of Home Energy Scores generated in Colorado in FY17 compared to FY16 with 5,132 scores produced, but short of the 6,000 annual goal. Approximately 1,500 of the scores came from Home Energy Score assessors, typically produced during a home energy audit. CEO worked with Energy Smart Colorado to generate nearly 3,040 scores from previous energy audit data and with software provider OptiMiser to produce scores from past weatherization audit data. Working with partners, CEO conducted outreach to BPI-certified home energy auditors, encouraging them to become Home Energy Score qualified assessors. CEO is seeing a lag from when candidates are recruited to when they become qualified assessors. This is because assessor candidates have up to six months to train for and pass the Home Energy Score exam. In FY17, CEO recruited 14 new Home Energy Score assessors by the end of FY17. CEO continued to provide free training on the Home Energy Score and the Green MLS to real estate brokers across Colorado.

CEO modified its new homes/codes for FY 2017 to better reflect its impact on the market. CEO identified two regions—Colorado Springs/El Paso County and Grand Junction/Mesa County— to focus its efforts due to the volume of new construction compared to a low HERS penetration. The intention of the goal was to reflect CEO’s direct impact on increasing the number of HERS scores in this region. CEO conducted training in Colorado Springs and Grand Junction and provided technical to support builders in these areas. The training goal was modified to include the range of residential training currently administered through CEO including in-person and webinar trainings. Progress toward this goal is on track and trainings continue to take place across Colorado. CEO’s goal to increase the percentage of new homes with a HERS score to 17% is behind at 15.03%. CEO is evaluating more effective metrics to capture results from training efforts because there is a lag of up to a one year between when permits are pulled and when a HERS rating is performed. Twelve jurisdictions have applied for and received 2015 IECC assistance. The City of Aspen formally adopted 2015 IECC, while the other 11 jurisdictions have plans to do so in the next year.

* This goal was not reflecting the revised work for the new fiscal year. The original goal captured all the real estate stakeholder training. This operational measure focuses on one segment of industry that has the greatest influence on the HEScore.

SPI 4: Energy Efficiency and On-Site Clean Generation – Low-Income Energy Burden
Major Program Area – Weatherization Assistance Program
Process – Inspection of sub-grantee closed housing units

Measure	FY12 Actual	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	FY17 Total	1-Year Goal	3-Year Goal
Energy efficiency measures performed on low-income eligible homes	7,087	4,137	2,925	3,050	2,969	331	386	454	*1,011	2,182	2,000	2,000
Percent of home retrofits meeting or exceeding performance standards for weatherization	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note: The 3-year goal is a projected annual goal, not a cumulative goal.

The weatherization assistance program inspects 5% of Colorado weatherized homes (app. 2,000) for quality assurance. The program’s numbers are reported a month after installations.

*The number includes multi-family units that are reported at the end of the fiscal year.

SPI 5: Innovative Energy Production - Emerging Energy Technologies
Major Program Area – Policy and Research
Process - Market assessments to analyze opportunities and barriers

Measure	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	FY17 Total	1-Year Goal	3-Year Goal
Pressure-reducing valve (PRV) hydropower workshops for water utility stakeholders	N/A	N/A	N/A	N/A	0	1	1	1	3	2	N/A
Number of stakeholders attending	N/A	N/A	N/A	N/A	0	13	7	2	22	25	N/A
Geothermal stakeholders to	N/A	N/A	N/A	N/A	0	0	0	0	0	1	N/A

complete and release a statewide geothermal strategy report											
Number of Colorado Geothermal Coalition meetings hosted	N/A	N/A	N/A	N/A	2	1	1	1	5	5	N/A
Local government stakeholders to design and deploy a database of energy information for Colorado buildings	N/A	N/A	N/A	N/A	0	0	0	1	1	1	N/A
Number of contacts with stakeholders	N/A	N/A	N/A	N/A	5	0	0	0	5	5	N/A
Colorado Recycled Energy Market Overview updated and a customer/developer commitment for a recycled energy project secured	N/A	N/A	N/A	N/A	0	0	0	1	1	2	N/A
Number of contacts with recycled energy stakeholder	N/A	N/A	N/A	N/A	7	19	8	16	50	10	N/A
Electric cooperative partner established on a feasibility analysis of a shared renewable energy project	N/A	N/A	N/A	N/A	0	0	0	1	1	1	N/A
Number of contacts with stakeholders	N/A	N/A	N/A	N/A	12	11	8	11	42	20	N/A

Note: The 3-year goal is a projected annual goal, not a cumulative goal.

CEO's Policy and Research area conducts market assessments to determine opportunities and barriers for emerging energy technology. These project assessments are prioritized each year based on the need for more information related to a promising emerging technology in Colorado. After assessments are complete, the office works with targeted stakeholders to gather feedback on project aspects that could be improved for future market assessments.

The statewide geothermal strategy report has been drafted and will be formatted and released in August 2017. GCC, a cement plant in Pueblo, has expressed interest in receiving an initial screening for a recycled energy project, but CEO's contractor was not able to get its data submitted in time to qualify for the no-cost feasibility study, and they were not able to secure a commitment for a recycled energy project.