



Strategic Policy Initiatives: The Colorado Energy Office (CEO) identified several strategic policy initiatives for FY 2015-16 and beyond. For this performance evaluation, the Department has updated progress on the initiatives identified in the FY 2016 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 June 30, 2016. 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 is well-positioned 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 3% by June 30, 2020, diversifying transportation fuel use for all Coloradans.

Progress: Progress Outcome:

CNG: CNG fuel sales in Colorado increased from 2,583,243 GGEs to 5,648,589 GGEs in 2014, and declined slightly to 5,627,307 GGEs in 2015. This was due in part to the market response to lower gasoline prices. The Colorado Department of Revenue has a three-month delay in releasing excise tax data; therefore, CEO will not have FY 2016 results until late October 2016.

EV: As of December 2015, Colorado had 6,341 EVs in the state, increasing light duty vehicles sold in Colorado from 0.62% in 2013 to 0.9% in 2015. CEO will have an updated EV percentage of the first quarter of 2016 by August 2016. With new legislation that will give EV consumers point of purchase tax credit savings effective January 2017, CEO anticipates a surge in EV sales.

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 specified federal and state dollars, CEO is making awards to install new CNG and EV stations and will monitor and evaluate progress through the state's contract standards.

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 the amount of fuel burned. 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 12.6% from 273,253 MMBtu in FY16 to at least 307,878 MMBtu by June 30, 2018.

CEO's direct energy efficiency projects including the following programs will result in energy savings over the next two years: 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: In FY 2016, CEO launched the Colorado Dairy and Irrigation Efficiency and Energy Savings for Schools Programs. These programs provide energy audits and technical assistance to producers and schools located in rural Colorado. Part of technical support includes connecting participants to various funding sources. The lag time between audits, access to financial support, and implementation has been longer than anticipated resulting in fewer completed projects than estimated for this fiscal year. Currently there are 29 producers and 17 schools in the process of implementation. FY 2016 savings from these programs is 1,579 MMBTus. In FY 2017, CEO estimates that energy savings will be approximately 21,600 MMBTus for both programs. CEO's Energy Performance Contracting Program saw six groups execute energy performance contracts in FY 2016, resulting in 90,104 MMBTu savings, lower than the projected estimates. CEO will continue to assess the EPC part of the SPI metric and may identify changes based on average number of executed projects per year as well as scopes of projects. CEO's Weatherization Assistance Program achieved its goal of 41,919 MMBTU in savings. In total, direct savings from CEO's energy efficiency programs was 133,602 MMBTus.



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, and fell to 99 MMBtu in 2014. CEO is assessing the factors that drove the increase and decrease. Specifically, CEO is looking at normalizing energy use and assessing if Denver’s housing shortage (due to the large population influx) likely increased per household consumption. CEO will continue to assess this SPI metric and may identify changes that better reflect CEO’s ability to impact energy use in Colorado’s residential sector.

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. Progress data will be captured on an annual basis.

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.

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. CEO’s annual energy savings for low-income household in its weatherization assistance program is 41,919 MMBTus.

To achieve these goals, CEO is contracting with external vendors and agencies to perform energy audits, ratings, trainings and retrofits. CEO is monitoring and evaluating progress through the state’s contract standards. CEO is conducting presentations and trainings to educate stakeholders and build partnerships; educating consumers through identified communication channels; and performing quality assurance through the Colorado’s Weatherization Assistance Program.



Innovative Energy Production: Commercialization and Market Transformation of Emerging Energy Technologies

Colorado's diverse portfolio of electricity generation includes both traditional fossil fuel and a wide range of renewable energy resources. Through the Renewable Energy Standard, the state is a leader in the cost-effective transition to an electric generating portfolio, relying less on carbon-emitting resources. CEO is focusing on the continued advancement of clean energy electric generation in the state, aiding in the commercialization of near-market-ready emerging technologies.

SPI 5: Increase generation from emerging clean technologies by 100% from 130,000 MWh in 2013 to 260,000 MWh by June 30, 2018, diversifying electricity generation for all Coloradans. In 2013, electricity from emerging energy technologies totaled 135,377 MWh, and increased by 45% to 196,318 MWh in 2014.

Progress Outcome:

In 2013, electricity from emerging energy technologies totaled 135,377 MWh, and increased by 45% to 196,318 MWh in 2014. Small generators report to the U.S. Energy Information Administration (EIA) on an annual basis, and EIA has a 10-month delay in releasing generation data from small generators. Data for 2015 will not be available until October 2016.

Market assessments represent a means to commercialization and market transformation goals. To investigate the opportunities that may increase generation from energy clean technologies, market assessments are being designed and executed by working closely with key stakeholders to assure that the analysis is properly targeted and of greatest value to investors and other market movers.



Operational Measures

SPI 1: Alternative Fuel Vehicles - Diversifying transportation fuel use for all Coloradans

Major Program Area – Programs and Initiatives
Process – Grant Funding Rounds and Contract Execution

Measure	FY13 Actual	FY14 Actual	FY15 Actual	Q1 FY16	Q2 FY16	Q3 FY16	Q4FY16	FY16 Total	1-Year Goal	*3-Year Goal
Publicly accessible compressed natural gas fueling stations awarded	N/A	N/A	11	4	-1	1	0	4	9	5
Number of funding rounds through RFAs	N/A	N/A	2	1	0	1	0	2	2	2
Percent of contracts issued within 30 days after awarded	N/A	N/A	100%	100%	N/A	N/A	0	75%	100%	100%
Electric vehicle charging stations awarded outside of Denver Metro	13	21	50	20	23	-3	13	53 goal exceeded	35	20
Number funding rounds through RFAs	1	3	3	1	1	1	0	3	3	3
Percent of purchase orders issued within 30 days after awarded	N/A	N/A	100%	100%	82%	N/A	100%	92%	100%	100%

***Note: The 3-year goal is a projected annual goal, not an accumulative goal.**

Through the ALT Fuels Colorado program, CEO has issued awards for a total of 15 CNG stations since the program’s inception. ALT Fuels Colorado funding rounds are scheduled semi-annually in July and January between 2014 and 2017. The last ALT Fuels Colorado grant awards for the fiscal year were made in January 2016. CEO issued one CNG fueling station award in Fort Morgan. Additionally, one applicant declined an award issued in Round 3. As a result of the last



funding round, CEO did not meet its annual goals. A total of four stations will be funded in FY 2016, falling five under the FY goal of nine sites. Due to the current relatively low gas and diesel prices, the program has seen more caution with CNG infrastructure investment. Charge Ahead Colorado awards are made three times a year. During the fourth quarter, four stations were declined for a variety of reasons. The Charge Ahead Colorado program made awards for 17 additional charging units in May. Awards are based on available federal funds and demand for stations. CEO exceeded its annual goal and awarded 18 more electric vehicle stations for a total of 53 stations for the fiscal year. This was due to successful outreach and strong coordination with stakeholders. CEO was able to award these additional stations because of flexibility in funding in the multi-year grant program.

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	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	FY16 Total	1-Year Goal	*3-Year Goal
Energy audits performed for Colorado producers	N/A	12	N/A	2	17	17	28	64	80	60
Percent of applications reviewed	N/A	N/A	N/A	100%	100%	100%	100%	100%	100%	100%
Percent of audits monitored for quality assurance (minimum of 40%)	N/A	N/A	N/A	100%	100%	0	26%	50%	40%	40%
Introductory EPC presentations and MOUs	N/A	N/A	19/9	2/1	4/3	5/1	6/2	17/7	20/10	24/12
Number of preliminary interactions before presentations/MOUs	N/A	N/A	38	5	9	4	11	29	40	48
Introductory ESS presentations and MOUs	N/A	N/A	24/4	6/0	5/2	20/18	0/0	31/21 Goal exceeded	24/12	24/12
Number of preliminary interactions before presentations/MOUs	N/A	N/A	48	12	15	14	15	46	48	48

***Note: The 3-year goal is a projected annual goal, not an accumulative goal.**



The Colorado Dairy and Irrigation Efficiency Program completed 64 audits and renewable energy assessments for producers. The program fell short of its goal to complete 80 audits for the fiscal year; however, the efforts initiated in FY 2016 will achieve the 2016 goals in the first quarter of FY 2017. It resulted in a time lag issue. Both the Energy Performance Contracting and Energy Savings for Schools programs use outreach and presentations to establish agreements (Memorandums of Understanding - MOUs) with districts and jurisdictions. Sometimes MOUs are executed without conducting presentations though a presentation is often the first step in securing an MOU. A signed MOU is a key indicator that an energy audit will take place and energy efficiency improvements will be implemented. A signed MOU also provides access to CEO's technical support services. (Energy/MMBTu savings). The EPC Program secured seven MOUs in the final quarter but fell short to meet the annual goal. The Energy Savings for Schools program exceeded the annual goal by delivering 31 presentations and executing 21 MOUs.

SPI 3: Energy Efficiency and On-Site Clean Generation – Residential Energy Use
Major Program Area – Programs and Initiatives
Process – Training and recruitment

Measure	FY13 Actual	FY14 Actual	FY15 Actual	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	FY16 Total	1-Year Goal	*3-Year Goal
Home Energy Scores completed	N/A	N/A	N/A	27	231	390	203	851	2,000	10,000
Number of real estate stakeholders that successfully completed training	579	1063	1242	26	61	879	947	1913	1470	1,500
Number of qualified assessors recruited	N/A	N/A	N/A	23	7	38	21	59	85	250
Colorado Springs builders participating in a CEO-sponsored technical assistance or building science program	N/A	N/A	N/A	5	1	N/A	N/A	6 Goal met	6	15
Number of inquiries through Colorado Springs Utility partnership	N/A	N/A	N/A	0	11	N/A	N/A	11 Goal met	10	20
New homes sold with a Home Energy Rating System Index rating	N/A	6,784	8,385	1990	2346	1945	2551	8,832	9,000	12,000



Number of Energy Code trainings	N/A	21	30	0	1	29	24	54	50	50
Number of builder sales trainings	N/A	21	37	2	11	6	7	26	48	30

***Note: The 3-year goal is a projected annual goal, not an accumulative goal.**

Up until FY 2016, the real estate stakeholder trainings focused on the Home Energy Rating System Index and the new home market. Due to several market barriers, Colorado found a better tool to address the existing home market. In September of FY16, Colorado launched the Department of Energy’s Home Energy Score specifically for the existing home market. CEO’s work plan included building the infrastructure, training and certifying HES assessors, and building market awareness. Challenges in each area resulted in fewer HES scores than projected; however, programmatic improvements are already in place for FY 2017. The numbers of HERS scores was slightly under the goal. Planned FY 2017 strategies should result in achievement of this goal. In other areas, builder training and energy code training, CEO met or exceeded its goal.

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	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	FY16 Total	1-Year Goal	*3-Year Goal
Energy efficiency measures performed on low-income eligible homes	7,087	4,137	2,925	3,050	377	504	*733	1,355	2,969 Goal Exceeded	2,600	2,600
Percent of home retrofits meeting or exceeding performance standards for weatherization	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

***Note: The 3-year goal is a projected annual goal, not an accumulative goal.**

*This number reflects an updated Q3 number that includes March units.

The weatherization assistance program inspects 5% of Colorado weatherized homes (app. 2,600) for quality assurance. The program’s numbers are reported a month after installations. The number of completed units are reported the 15th of the following month.



CEO installed weatherization measures in 2,969 low-income homes, 369 units above the annual goal. The multi-family segment accounted for an additional 463 units.

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	Q1 FY16	Q2 FY16	Q3 FY16	Q4 FY16	1-Year Goal	*3-Year Goal
Micro-hydro assessment for municipal water districts and pilot project	N/A	N/A	N/A	0	0	0	1 Goal met	1	N/A
Number of water districts contacted	N/A	N/A	N/A	13	0	0	2 Goal met	15	N/A
Two studies to assess the market potential/ market barriers for emerging clean technologies	N/A	N/A	N/A	1 goal met	N/A	N/A	N/A	1	1
Number of meetings with emerging technology stakeholders	N/A	N/A	N/A	5	N/A	N/A	N/A	5	5
Geothermal resource assessment and feasibility study for Rico, Colorado	N/A	N/A	N/A	0	0	0	1 Goal met	1	N/A
Number of Rico geothermal stakeholders contacted	N/A	N/A	N/A	8	1	1	1 Goal met	10	N/A
Clear Creek County assistance in accessing technical and financial resources for a geothermal project	N/A	N/A	N/A	0	0	0	1 Goal met	1	N/A
Number of Clear Creek geothermal stakeholders contacted	N/A	N/A	N/A	7	1	3	1 Goal met	10	N/A

***Note: The 3-year goal is a projected annual goal, not an accumulative 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.