



## Colorado Energy Office Q4 FY2018 Performance Evaluation (June 2018)

**Strategic Policy Initiatives:** The Colorado Energy Office (CEO) identified several strategic policy initiatives for FY2018 and beyond. For this performance evaluation, the Department has updated progress on the initiatives identified in its FY2018 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, 2018. 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 vehicles. 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 Outcome:**

**CNG:** CNG fuel sales in Colorado increased from 5,815,863 GGEs in 2015 to 8,221,186 GGEs in 2016 to 9,664,149 GGEs in 2017 (Data source: DOR). Sales for 2018 will not be available until early 2019, but FY2018 CNG sales through March 2018 totaled 7,406,077 GGEs, representing a 10.4% increase over the same period in the previous year.

**EV:** Colorado had an estimated 8,138 EVs in the state in 2016, increasing new light duty vehicles sold in Colorado from 0.9% in 2015 to 1.2% in 2016 (Data source: DOR and Polk). In 2017, 4,156 EVs were sold in Colorado (up from 2,711 in 2016, representing a 53% increase in annual sales), increasing new light duty vehicles sold in Colorado to 2% in 2017. Sales data for 2018 will not be available until early 2019, but FY2018 new EV sales through April 2018 totaled 3,548, representing a year over year increase of 34% or 1.9% of total light duty sales during that period (Data source: Alliance of Automobile Manufacturers and Colorado Auto Dealers Association).

Note that while prior year numbers were based on a calendar year, the final numbers above represent fiscal year numbers. For the FY2019 performance plan, CEO will shift this methodology and use fiscal year numbers for its goals and quarterly and annual reporting figures.



One of CEO's main strategies for removing market barriers to alternative fuel adoption is to increase the number of publicly-accessible alternative fueling and charging stations along Colorado's major transportation corridors. This will reduce driver concerns about the distance from one station to another and increase the likelihood of alternative fuel vehicle purchases. Through two grant programs, Colorado is incentivizing the market by providing grants that reduce the upfront cost of deploying fueling and charging infrastructure. CEO is facilitating grant opportunities that 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.

While CEO continues to support statewide development of the CNG market, its efforts are focused on specific geographical areas that represent gaps in Colorado's CNG transportation infrastructure. Due to relatively low gas and diesel prices, the program continues to see significant caution from market participants with respect to CNG infrastructure investment. CEO continues to adapt to these market forces and in FY2018 it shifted a portion of its grant funding toward EV fast-charging stations along Colorado's major transportation corridors.

#### **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 also increase the comfort of their homes and the value of their properties. Colorado is focusing efforts in four distinct segments: 1) economically disadvantaged residents to give them access to cost-effective improvements that will reduce their energy usage and improve the comfort of their homes; 2) school administrators to provide energy management information, energy audits and technical assistance to achieve measurable savings; 3) public jurisdictions to provide information about energy performance contracting; and 4) agricultural producers to provide energy audits and technical support that will reduce energy use.

**SPI 2:** Increase energy savings resulting from CEO's direct energy efficiency projects by 14.6% from a goal of 151,265 MMBtu in FY2016 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) Low-Income Energy Services; 2) Energy Performance Contracting (EPC) for public buildings; 3) Energy Savings for Schools; and 4) Agricultural Energy Efficiency. Progress data is captured on an annual basis.



**Progress Outcome:**

CEO's direct energy efficiency projects resulted in 146,995 MMBtu of energy savings in FY2018 (Data source: CEO contractor attested energy audits). The energy savings for CEO's direct energy efficiency projects were lower than expected due to one key factor. CEO's EPC program had an extremely successful FY2018 in terms of securing project agreements (MOUs), but the energy savings from those projects are not included in CEO's progress outcome calculations until the project has been completed and those energy savings are realized. As such, the progress outcome presented here does not accurately represent the success of CEO's efforts, particularly its EPC program, and CEO will reevaluate its methodology for tracking and reporting the successes of its direct energy efficiency projects in FY2019.

**SPI 3:** 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 low-income residences access to cost-effective improvements that will reduce their energy usage and improve the comfort of their homes. In FY2018, the program saved 43,696 MMBtu and achieved a \$69 annual increase in energy cost savings, raising its average low-income household annual energy cost savings to \$330.

To achieve these goals, CEO is contracting with external vendors and agencies to perform energy audits, ratings, trainings, and cost-effective retrofits and solar installations. 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. CEO is focusing on innovation, including the continued advancement of clean energy electric generation in the state and aiding in the commercialization of near-market-ready emerging technologies.

**SPI 4:** Assist clean technology developers to increase annual generation of emerging technologies by 100% from 130,000 MWh in 2013 to 260,000 MWh by 2018, and increase the capacity of hydropower by 16% from 209 MW in 2010 to 242 MW by 2018.



**Progress Outcome:**

In 2013, electricity from emerging energy technologies totaled 135,377 MWh, which increased by 78% to 240,755 MWh in 2016. As of June 2018, emerging energy technologies totaled 252,143 MWh (based on incomplete, early release data from EIA. Final data will be issued in August 2018). Hydropower capacity increased by 15% from 209 MW in 2010 to 239.74 MW in 2017. Hydropower data for 2018 is still being collected and will be finalized in August 2018.

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

Measure	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	Q1 FY18	Q2 FY18	Q3 FY18	Q4 FY18	FY18 Total	1-Year Goal	3-Year Goal
<b>Publicly accessible compressed natural gas fueling stations awarded</b>	N/A	11	4	0	0	0	0	0	0	3	3
Number of CNG gallon equivalents committed to by fleet owners in awarded CNG station proposals	N/A	1,995,164	1,441,399	0	0	0	0	0	0	175,000	175,000
<b>*Electric vehicle charging stations installed outside of Denver Metro</b>	17	42	51	28	*0	4	3	19	26	20	20
**Number of applications received	N/A	30	30	31	**14	7	19	0	40	40	40
Number of EV Wired Workplace events	N/A	N/A	4	4	1	0	0	3	4	12	12
Number funding rounds through RFAs	3	3	3	3	1	1	1	0	3	3	3

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

**\*CEO will be reporting on electric vehicle charging stations installed moving forward as opposed to awarded as it has in the past**

**\*\*CEO will be reporting on the # of applications received moving forward as opposed to the # of stations proposed as it has in the past**

CEO is supporting the deployment of CNG fueling infrastructure along Colorado's major highway corridors . To provide greater flexibility for potential developers, the program continues to accept station proposals on a rolling basis. However, due to the relatively low gas and diesel prices, station developers remain cautious to invest in new CNG infrastructure. In FY2018 no applications were submitted for CNG stations. While continuing to offer the program, CEO



has shifted focus and staff time to other alternative fuel vehicle programming and strategies. CEO continues to engage with stakeholders to remain responsive to the market as commodity prices fluctuate. Refuel Colorado, CEO's fleet-coaching program, continued to provide public and private fleets across Colorado with timely and concise information pertaining to investment opportunities for alternative fuels with a goal of increasing local demand for alternative fuel vehicle fueling and charging infrastructure.

Charge Ahead Colorado EV charging grants are awarded 3 times a year. For round 1 in Q1 FY2018, CEO received 14 applications for 32 stations. From these applications, CEO issued 5 awards to install 1 DC Fast charger and 7 level II chargers. For round 2 in Q2 FY2018, CEO received 7 applications for 19 chargers. From these applications, CEO issued 5 awards for 10 level II chargers. For Round 3 in Q3 FY2018, CEO received 19 applications for 63 chargers. From these applications, CEO issued 7 awards for 2 DC Fast chargers and 8 level II chargers. In total for the fiscal year, CEO issued awards for 28 (3 DCFC and 25 Level II) chargers and 26 of these were complete and operational by the end of the FY.

CEO continues to focus on workplace charging since employees with access to workplace charging are more likely to purchase an EV. CEO is working with its Refuel Colorado fleet coaches to target potential workplace applicants and it issued 4 wired workplace recognition awards in FY2018. CEO will continue to promote the use of workplace charging as national data indicates that employees are six times more likely to purchase an EV at workplaces 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 presentations and MOU execution**

Measure	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	Q1 FY18	Q2 FY18	Q3 FY18	Q4 FY18	FY18 Total	1-Year Goal	3-Year Goal
<b>Energy audits performed for Colorado producers</b>	<b>N/A</b>	<b>12</b>	<b>64</b>	<b>60</b>	<b>0</b>	<b>22</b>	<b>18</b>	<b>20</b>	<b>60</b>	<b>60</b>	<b>60</b>
Number of applications received for Colorado Agricultural Energy Efficiency Program	N/A	N/A	84	71	17	19	14	15	65	70	70
Partner contributions leveraged from CEO's Regional Conservation Partnership Program partners	N/A	N/A	N/A	\$275,000	\$0	\$0	\$250,000	50,027	\$300,027	\$275,000	\$275,000
<b>EPC MOUs</b>	<b>N/A</b>	<b>9</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>14</b>	<b>12</b>	<b>12</b>
Number of preliminary presentations before MOUs	N/A	19	17	31	15	6	10	5	36	24	48
<b>ESS MOUs</b>	<b>N/A</b>	<b>4</b>	<b>21</b>	<b>18</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>16</b>	<b>18</b>	<b>18</b>
Number of preliminary presentations before MOUs	N/A	24	31	31	4	10	15	7	36	24	48

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

CEO’s Agricultural Energy Efficiency Program met its target for FY2018. The program brought in new partners as it expanded to several new sectors of the agricultural market including poultry and swine operators. With a year-end total of 14 EPC MOUs, CEO has exceeded its goal of 12 MOUs for FY18. Related to this, CEO also exceeded the target number of preliminary presentations by 50% for a total of 36. The program is seeing a correlation between the increase in the number of presentations and the resulting increased number of signed MOUs. CEO fell slightly short of the goal of 18 MOUs for the ESS program, with a total of 16 at year end. The program launched a series of educational road-trips in April to try to increase the number of MOUs and saw some progress. For the future, the program will focus more on district level involvement to reach a higher number of schools.



SPI 3: 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	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	Q1 FY18	Q2 FY18	Q3 FY18	Q4 FY18	FY18 Total	1-Year Goal	3-Year Goal
Energy efficiency measures performed on low-income eligible homes	2,925	3,050	2,969	2180	239	332	257	1086	1914	1,750	2,000
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 a cumulative goal.**

The Weatherization Assistance Program inspects 5% of Colorado weatherized homes for quality assurance. The program’s numbers are reported a month after installations. Based on historical data and seasonal projections, the Weatherization Assistance Program is tracking to meet its FY2018 operational goals.





**SPI 4: Innovative Energy Production - Emerging Energy Technologies**

**Major Program Area – Policy and Research**

**Process - Market assessments to analyze opportunities and barriers and targeted outreach to enable project implementation**

Measure	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual	Q1 FY18	Q2 FY18	Q3 FY18	Q4 FY18	FY18 Total	1-Year Goal	3-Year Goal
<b>Pressure-reducing valve (PRV) hydropower webinars for water utility stakeholders</b>	N/A	N/A	N/A	3	0	0	0	1	1	2	N/A
Number of stakeholders attending	N/A	N/A	N/A	22	0	0	0	42	42	12	N/A
<b>Customer/developer commitment for a recycled energy project secured</b>	N/A	N/A	N/A	1	0	0	0	0	1	1	N/A
Number of contacts with recycled energy stakeholders	N/A	N/A	N/A	50	0	11	28	45	84	20	N/A

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

CEO’s Policy and Research unit conducts market assessments to determine opportunities and barriers for emerging energy technologies and conducts targeted outreach to enable project implementation. 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 completed, the office works with targeted stakeholders to gather feedback on project aspects that could be improved for future market assessments.

In FY2018, CEOs Policy and Research unit has adjusted its operational measures to respond to reductions in funding and staffing. As such, some new operational measures have been adopted while others have been terminated (i.e. commitment to secure a customer/developer energy storage project). CEOs Policy & Research unit held a PRV hydropower webinar for water utility stakeholders which was attended by 42 stakeholders. Although CEO did not secure a commitment for a Recycled Energy project, the outreach efforts provided important feedback to reshape the FY2019 program offering. The Policy & Research unit plans to modify and expand the project scope for FY19 to include a wider source of qualifying technologies for inclusion as part of the program.