



Strategic Policy Initiatives: The Colorado Energy Office (CEO) has 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 FY2016 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 March 31, 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 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.

In 2013, CNG fuel sales in Colorado totaled 2,583,243 GGEs, increasing to 5,648,589 GGEs in 2014, and declining slightly to 5,627,307 GGEs in 2015. 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 .9% in 2015.

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.



Through the ALT Fuels Colorado program, CEO has issued awards for a total of 15 CNG stations since the program's inception. One applicant declined an award issued in the third funding round earlier this year. The fourth funding round took place in January 2016. Only one award was issued in March, the final funding round for this fiscal year. The program yielded one proposal for CNG fueling in Fort Morgan and two proposals for co-located electric charging and propane fueling respectively at the previously funded Henderson CNG fueling site. As a result of this last round, CEO will not meet 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. However, with historical stability in CNG costs, CEO is optimistic about building out the projected CNG infrastructure next fiscal year with the flexibility of the program's multi-year federal funding.

The Charge Ahead Colorado program made awards for 23 charging units in December. Three stations from earlier rounds were declined due to investor's changes in infrastructure locations. This brings the year's total to 40 EV charging stations, still exceeding CEO's annual goal of 35 stations. Awards are based on available federal funds and demand for stations. Another funding round took place in March and awards will be made in April.

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 internal energy efficiency projects including the following programs will result in energy savings over the next two years: 1) agricultural energy efficiency; 2) energy performance contracting for public buildings; 3) Energy Savings for Schools; and 4) weatherization assistance. Progress data will be captured on an annual basis.

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

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.

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. Progress data will be captured on an annual basis.

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.

CEO published two market research reports: Coal Mine Methane in Colorado and Colorado Recycled Energy Market Overview. The reports identify resource potential for the deployment of coal mine methane and recycled energy in Colorado and barriers to market. CEO will use this information to help deploy these technologies effectively.

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 | FY12 Actual | FY13 Actual | FY14 Actual | FY15 Actual | Q1 FY16 | Q2 FY16 | Q3 FY16 | FY16 Total | 1-Year Goal | 3-Year Goal |
|--|-------------|-------------|-------------|-------------|---------|---------|---------|---------------------|-------------|-------------|
| Publicly accessible compressed natural gas fueling stations awarded | N/A | N/A | N/A | 11 | 4 | -1 | 1 | 4 | 9 | 5 |
| Number of funding rounds through RFAs | N/A | N/A | N/A | 2 | 1 | 0 | 1 | 2 | 2 | 2 |
| Percent of contracts issued within 30 days after awarded | N/A | N/A | N/A | 100% | 100% | N/A | N/A | 100% | 100% | 100% |
| Electric vehicle charging stations awarded outside of Denver Metro | N/A | 13 | 21 | 50 | 20 | 23 | -3 | 40 goal exceeded | 35 | 40 |
| Number funding rounds through RFAs | N/A | 1 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 3 |
| Percent of purchase orders issued within 30 days after awarded | N/A | N/A | N/A | 100% | 100% | 82% | N/A | 89% | 100% | 100% |



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 will 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. However, with historical stability in CNG costs, CEO is optimistic about building out the projected CNG infrastructure next fiscal year with the flexibility of the program’s multi-year federal funding. Charge Ahead Colorado awards are made three times a year. The Charge Ahead Colorado program made awards for 23 charging units in December. Three stations were declined due to investor’s changes in locations. This brings the year’s total to 40 EV charging stations, still exceeding CEO’s annual goal of 35 stations. Awards are based on available federal funds and demand for stations. The last funding round took place in March and awards will be made in April.

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 | FY12 Actual | FY13 Actual | FY14 Actual | FY15 Actual | Q1 FY16 | Q2 FY16 | Q3 FY16 | FY16 Total | 1-Year Goal | 3-Year Goal |
|--|-------------|-------------|-------------|-------------|---------|---------|---------|------------|-------------|-------------|
| Energy audits performed for Colorado producers | N/A | N/A | 12 | N/A | 2 | 17 | 17 | 36 | 80 | 60 |
| Percent of applications reviewed | N/A | N/A | N/A | N/A | 100% | 100% | 100% | 100% | 100% | 100% |
| Percent of audits monitored for quality assurance (A minimum of 40%) | N/A | N/A | N/A | N/A | 100% | 100% | 0 | 53% | 40% | 40% |
| Introductory EPC presentations and MOUs | N/A | N/A | N/A | 19/9 | 2/1 | 4/3 | 5/1 | 11/5 | 20/10 | 24/12 |
| Number of | N/A | N/A | N/A | 38 | 5 | 9 | 4 | 18 | 40 | 48 |



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|--|------------|------------|------------|-------------|------------|------------|--------------|--------------------------------|--------------|--------------|
| preliminary interactions before presentations/MOUs | | | | | | | | | | |
| Introductory ESS presentations and MOUs | N/A | N/A | N/A | 24/4 | 6/0 | 5/2 | 20/18 | 31/20 Goal exceeded | 24/12 | 24/12 |
| Number of preliminary interactions before presentations/MOUs | N/A | N/A | N/A | 48 | 12 | 15 | 14 | 31 | 48 | 48 |

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). In the third quarter, CEO monitored 0 audits as appropriate QA/QC was developed during the first half of the year. CEO expects to pick up with intermittent QA monitoring in 4th quarter of this year.

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

| Measure | FY12 Actual | FY13 Actual | FY14 Actual | FY15 Actual | Q1 FY16 | Q2 F16 | Q3 F16 | FY16 Total | 1-Year Goal | 3-Year Goal |
|---|-------------|-------------|-------------|-------------|-----------|------------|------------|------------|--------------|---------------|
| Home Energy Scores completed | N/A | N/A | N/A | N/A | 27 | 231 | 390 | 648 | 2,000 | 10,000 |
| Number of real estate stakeholders that successfully completed training | N/A | 579 | 1063 | 1242 | 26 | 61 | 879 | 966 | 1470 | 1,500 |
| Number of qualified assessors recruited | N/A | N/A | N/A | N/A | 23 | 7 | 38 | 68 | 85 | 250 |



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|--|-----|-----|--------------|--------------|-------------|-------------|-------------|----------------|--------------|---------------|
| Colorado Springs builders participating in a CEO-sponsored technical assistance or building science program | N/A | N/A | N/A | N/A | 5 | 1 | N/A | 6 Goal met | 6 | 15 |
| Number of inquiries through Colorado Springs Utility partnership | N/A | N/A | N/A | N/A | 0 | 11 | N/A | 11 Goal met | 10 | 20 |
| New homes sold with a Home Energy Rating System Index rating | N/A | N/A | 6,784 | 8,385 | 1990 | 1454 | 1214 | 5,550 | 9,000 | 12,000 |
| Number of Energy Code trainings | N/A | N/A | 21 | 30 | 0 | 1 | 29 | 30 | 50 | 50 |
| Number of builder sales trainings | N/A | N/A | 21 | 37 | 2 | 11 | 6 | 19 | 48 | 30 |

Up until FY16, 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. The real estate training is now focused on the Home Energy Score. CEO is continuing to work with HES stakeholders to refine the reporting process, but it is farther behind than anticipated. CEO is launching a consumer education campaign in the Denver metro area in the fourth quarter that will increase the HES numbers. Builder sales trainings and energy code trainings address the use of the Home Energy Rating System Index and how to seamlessly integrate HERS into the new home package.



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 | 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 | **474 | 1,355 | 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% |

The weatherization assistance program’s numbers are reported a month after installations. The program is on target for this quarter. CEO will be able to reach its annual goal.

*This number reflects an updated Q2 number that includes December’s units.

**Completed units for March are not reflected in this quarterly report.

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.



SPI 5: Innovative Energy Production - Emerging Energy Technologies
Major Program Area – Policy and Research

Process - Market assessments to analyze opportunities and barriers

| Measure | FY12 Actual | FY13 Actual | FY14 Actual | FY15 Actual | Q1 FY16 | Q2 FY16 | Q3 FY16 | 1-Year Goal | 3-Year Goal |
|--|-------------|-------------|-------------|-------------|------------|---------|---------|-------------|-------------|
| Micro-hydro assessment for municipal water districts and pilot project | N/A | N/A | N/A | N/A | 0 | 0 | 0 | 1 | N/A |
| Number of water districts contacted | N/A | N/A | N/A | N/A | 13 | 0 | 0 | 15 | N/A |
| Two studies to assess the market potential/ market barriers for emerging clean technologies | N/A | N/A | N/A | N/A | 1 goal met | N/A | N/A | 1 | 1 |
| Number of meetings with emerging technology stakeholders | N/A | N/A | N/A | N/A | 5 | N/A | N/A | 5 | 5 |
| Geothermal resource assessment and feasibility study for Rico, Colorado | N/A | N/A | N/A | N/A | 0 | 0 | 0 | 1 | N/A |
| Number of Rico geothermal stakeholders contacted | N/A | N/A | N/A | N/A | 8 | 1 | 1 | 10 | N/A |
| Clear Creek County assistance in accessing technical and financial resources for a geothermal project | N/A | N/A | N/A | N/A | 0 | 0 | 0 | 1 | N/A |
| Number of Clear Creek geothermal stakeholders contacted | N/A | N/A | N/A | N/A | 7 | 1 | 3 | 10 | N/A |



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. 1) CEO is under contract with Amec Foster Wheeler Environmental & Infrastructure Inc. to complete the micro-hydro assessment. Outreach to water delivery entities will commence in early April. 2) CEO completed two market research reports the first quarter and published in the third quarter: Coal Mine Methane in Colorado and Colorado Recycled Energy Market Overview. 3) Technical analysis of the Rico's resource is occurring now. The Colorado School of Mines (CSM) team will be planning another site visit for early spring. 4) CEO met with Clear Creek County officials and CSM staff on a consent agreement for early stage geothermal analysis. The agreement has been signed and work is scheduled to commence in April and finish in early June. The CSM team will utilize a geo-magnetic system to better identify and characterize the geothermal reservoir in the area.