



**Colorado Department of Corrections (CDCO)**



Not Applicable



Behind Annual Goal



On Track with Annual Goal



### Energy Consumption

Reduce energy consumption per square foot by a minimum of 2% annually (normalized for weather) and at least 12% by FY2020 from a baseline of FY2015.

On Track

The Department of Corrections is on track to meet energy reduction goals under EO D 2015-013. CDCO shows an overall reduction in energy use of 2.37% through reductions in electric, natural gas, and propane, when FY2016 use is compared to FY2015 energy use. In FY2016, CDCO finalized implementation of the Energy Performance Contract Energy Conservation Measures at two Correctional Facilities. In addition, the department installed cost avoidance measures, including LED lights and variable frequency drives.



### Water

Reduce potable water consumption by a minimum of 1% annually (normalized for weather) and at least 7% by FY2020 relative to an FY2015 baseline.

Behind

The Department of Corrections is behind on meeting potable water reduction goals under EO D 2015-013. CDCO has increased potable water use by 3.46% when FY2016 use is compared to FY2015 use. To correct this trend, the CDCO hopes to complete the first phase on an Alternate Water System (a name we've "coined" to describe use of untreated water to replace potable water) on the East Cañon City Prison Complex. This will take about 7,600,000 gallons a year in agri-business water use at Correctional Industries off of city water.



### Vehicle Petroleum Consumption

Reduce average petroleum-based fuel consumption per vehicle by a minimum of 4% annually and at least 20% by FY2020 from a baseline of FY2015 or 2% annually and at least 10% by FY2020 for vehicles deemed exempt.

Behind

Executive state agencies and departments shall further achieve an absolute reduction in petroleum-based fuel consumption by 15% or 7.5% for vehicles deemed exempt over the same time period.

*Important factors to consider: Vehicle miles/vehicle hours; number of EVs and NG vehicles*

Currently, CDCO is behind on the Vehicle Petroleum Goals. Due to an operational need to enhance our Parole efforts, additional parole vehicles were added to the CDCO Fleet in FY2016. However, CDCO has added video conferencing capabilities throughout the department, including the new headquarters. Employees are encouraged to use video conferencing or carpool to meetings to reduce vehicle miles. In FY2016, and as we move forward, the department continues to improve the mpg rating, and add hybrid vehicles, when old fleet vehicles are replaced.



### Greenhouse Gas Emissions

Reduce greenhouse gas emissions by a minimum of 1% annually and at least 5% below FY2015 levels by FY2020.

On Track

The Department of Corrections is on track to meet greenhouse gas emissions reduction goals. EnergyCAP (the State's Utility Management Program) shows a reduction of 3.64% in utility-related greenhouse gas emissions when FY2016 is compared to FY2015.



### Recycling and Waste Management

All state agencies and departments, working with CDPHE and the Council, shall develop and submit a plan for waste prevention and diversion to the Council by December 31, 2016. These plans must set clear goals for expanding waste prevention and diversion efforts within the agency or department as well as identify a measurement plan to assess progress toward goals.

By June 30, 2017, the Council shall develop quantifiable goals and metrics for recycling and waste diversion across state government beginning in FY2018 and continuing.

The Department of Corrections has waste management programs at all correctional facilities around the state. These include waste reduction, recycling, and composting programs. Where possible, CDCO uses plates and cutlery that can be washed and reused, and linens, towels, and mop heads that can be washed and reused. Cans, cardboard, and other recyclable packing materials are recycled. At a few of our facilities, composting diverts waste that would otherwise be sent to landfills.



### Environmentally Preferable Purchasing

In FY2017, at least 50% of white office paper collectively purchased by all executive state agencies and departments must contain a minimum of 30% post-consumer waste content, increasing annual purchases by 10% to at least 90% of paper purchases by FY2020.

In a document compiled by the Colorado Energy Office in September of 2016, the Department of Corrections on one purchase account, has achieved the interim goal that at least 50% of white office paper has the required post-consumer waste content. On a second purchase account, recycled content is minimal. This second account may be for print shop, printing stock, or other exempt paper purchases. We will continue to work collectively with other agencies to do our part to achieve the state-wide EPP goal for recycled content paper.

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# COLORADO

Greening Government  
Leadership Council

## Energy Management Report

FY16 (July 1, 2015 – June 30, 2016)

### Department of Corrections:

The Colorado Department of Corrections’ mission is, “To protect the citizens of Colorado by holding offenders accountable and engaging them in opportunities to make positive behavioral changes and become law-abiding, productive citizens.”

### The People:

 The following worked to prepare this document.

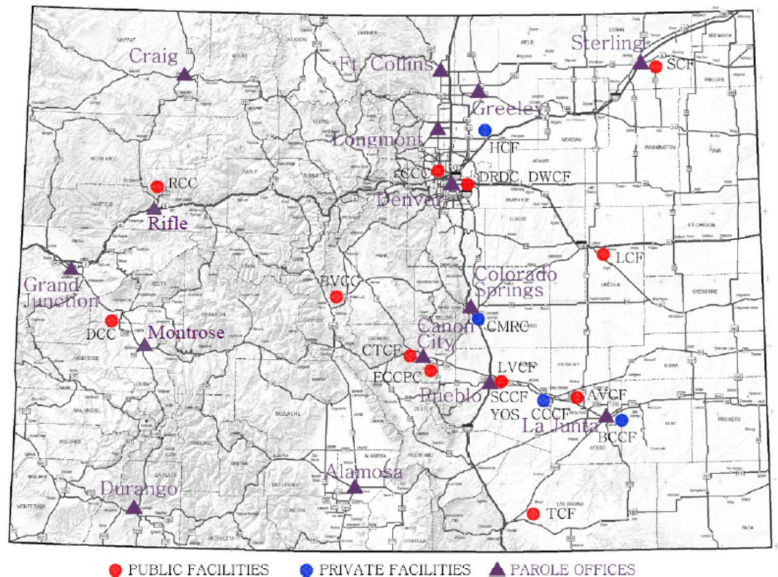
- Diana Dean, PE II - Utility Management Engineer
- John Gillogley, Utility Program Manager

### Agency/Department Information:

- Description: 20 correctional facilities; 2 repurposed/decommissioned facilities; leased space
- Occupancy: Approximately 6,482 employees; roughly 14,000 offenders

#### Figure 1 - Correctional Facility & Office Locations

The Colorado Department of Corrections has approximately 6,482 employees located at owned facilities and leased offices. The Department serves a population of roughly 14,000 offenders housed in 20 correctional facilities throughout the state. The CDOC organizational structure includes state owned-and-operated facilities and leased spaces to include Adult Parole and Prison institutions. CDOC-owned facilities are located throughout the State and include 618 buildings totaling approximately seven million gross square feet. This energy plan will focus on the campuses and buildings that comprise our state-owned correctional facilities mentioned above. The department will continue energy and water saving operations at these owned facilities.



The utility energy supply includes electric (both conventional and solar photovoltaic), natural gas, and propane. FY15 Department of Corrections Baseline energy use is as follows:

- Electric 106,200,000 kilowatt-hours
- Natural Gas 682,600 Dekatherms
- Propane 151,000 gallons

## Energy Goal Progress:

The Department of Corrections is on track to meet energy reduction goals under Executive Order D 2015-013. The department has reduced electric energy by 2.4%, natural gas energy by 3.7%, and propane energy by 3.0% when FY16 use is compared to FY15 energy use by billing month. When energy use is combined and calendarized, the Colorado Energy Office's preliminary analysis shows a FY16 decrease in energy use of 2.37% relative to the FY15 baseline year.

## Agency/Department Actions:

In FY16, the Department of Corrections finalized implementation of the Energy Performance Contract Energy Conservation Measures at Arkansas Valley and Limon Correctional Facilities. In addition, the department worked with facilities to install smaller energy conservation measures, including light-emitting-diode (LED) lights and variable frequency drives.

## Employee Engagement Actions:

In 2013, Facility Management Services, in cooperation with the Corrections Training Academy, developed and produced an Energy and Water Conservation Awareness training module. This training was offered as optional training during the annual on-line training offering during the 2014 training cycle. Several hundred staff members elected to take the training module. The Department of Corrections anticipates that in FY17, a revised training module will be developed from this foundation, so that we can reach additional staff members concerning greening government activities. This education and awareness module will offer suggestions on specific tasks that employees (and eventually offenders) may participate in to help the department reach its goals. In cooperation with the Greening Government Leadership Council, the department plans to cooperatively develop online training modules for sustainability, transportation, energy and water conservation, and waste reduction and recycling. We envision that conservation of energy and natural resources will become part of the CDOC Culture.

## FY17 Plans:

The Department of Corrections' buildings are mostly located on campuses, often containing such diverse occupancies as prison housing, food service, laundry, recreation space, and office space - many under a single roof. Beginning in FY17, we will initiate a detailed feasibility process (something similar to the American Society of Heating, Refrigerating, and Air-Conditioning Engineers - ASHRAE Level I—Walk-Through Analysis using some aspects of a Level II—Energy Survey Analysis, along with a few other items that will assist the Department in our efficiency, conservation, and maintenance efforts), targeting up to six (6) correctional facilities with the concurrence of the Colorado Energy Office. We anticipate this feasibility process will include some or all of the following activities: site tours and data collection, cursory modeling of energy use intensity, staff interviews, analysis of our identified Controlled Maintenance and Capital Renewal needs at each location, collecting data relevant to site- and centrally-identified energy/water conservation measures, and consideration of incorporating renewables. The Department expects that a definitive outcome of the process will be a third-party opinion as to what conservation measures are feasible to support through an Energy Performance Contract. Pending the outcome of these feasibility studies, we anticipate we will be moving forward with one or more Investment Grade Audits and, ultimately, Energy Performance Contracts.



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## Water Management Report

FY16 (July 1, 2015 – June 30, 2016)

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**The People:** The following worked to prepare this document.

- John Gillogley/Utility Program Manager
- Diana Dean/Utility Management Engineer
- Joan Chavez/Water, Wastewater, and Gas Systems Manager

### Agency/Department Information:

- The CDOC consists of numerous campuses and some isolated buildings (broken out for the Office of Risk Management as 618 buildings), consisting of approximately seven million gross square foot, including leased space.
- Occupancy data: staffing levels remained relatively constant at around 6,482; the offender average daily population is approximately 14,000 offenders.
- Many Department locations already use non-potable water for irrigation; remaining locations provide a marked opportunity to reach the Greening Government goals of reducing potable water usage 1% annually (normalized for weather) and 7% over the next four (4) fiscal years

### Water Goal Progress:

Preliminary data indicates a 3.46% increase in potable water use between FY15 and FY16; however, this increase may be more a reflection of annual precipitation differences or increased Colorado Correctional Industries (CCi) agri-business usage between these years, both of which should be taken into consideration in determining if the CDOC is meeting its potable water reduction goals. An analysis remains to be completed.

### Agency/Department Actions:

No specific Utility Conservation Measure aimed at reducing water usage was effected in FY16, outside of those associated with Energy Performance Contracts at the Limon Correctional Facility and the Arkansas Valley Correctional Facility (effected in part in both FY15 and FY16).

## Employee Engagement Actions:

The Department has identified greening government champions that roughly represent each management grouping of our correctional facilities, Correctional Industries, Parole, and support areas. Among their other roles, they will be advocates for water conservation measures at each facility, with direction on measures to be considered coming from the GGLC and the Facility Management Services Utility Management Program. On-line training will reinforce staff understanding and implementation of these measures. Offenders will be engaged when and where possible.

## FY17 Plans:

In FY17, our focus will be on one (1) phase of a major project - the East Cañon City Prison Complex Alternate Water System. This phase will put into operation a portion of a water system that is intended to eventually remove all of the Correctional Industries current agri-business operations off of potable water service on the East Cañon City Prison Complex. When this portion of the project is complete, over a full 365 days, this should result in a reduction in potable water usage of approximately 7,600 kgal of potable water.