COLORADO
Office of Sustainability
Department of Personnel & Administration

Office of Sustainability Strategic Plan

Introduction

The Colorado Office of Sustainability ("the Office") was established in January 2024 in the Department of Personnel & Administration to work with agencies across State government to lead by example on environmentally sustainable government facilities and operations to reduce pollution from State government, create a cleaner Colorado for future generations, and save taxpayers money.[1]

As of December 2024, State agencies have largely achieved the Greening Government Goals outlined in previous executive orders as described in the "Progress on Sustainability Goals" section below. In this Statewide Sustainability Strategic Plan, the Office establishes new quantifiable goals for State agencies and centralizes sustainability efforts to build on the success of past greening government directives. The Office plays a critical role in providing accountability and technical assistance to State agencies on sustainability initiatives, optimizing State operations, and maximizing the use of federal and private sector resources to further reduce costs for sustainability projects.

[1] Source: SB24-214

The statewide sustainability goals reflected in this strategic plan are also core pillars of Governor Polis' 2025-2027 Operational Agenda, which ensures Cabinet-level support and coordination.

Background

The State of Colorado is committed to saving taxpayers money and reducing the impact of State operations on Colorado's environment and public health. Through a series of executive orders over the past 20 years, Colorado has shown its commitment to making government operations more energy efficient and sustainable.

Four Governors have signed 11 Greening Government Executive Orders since 2003. The Greening Government Executive Orders include directives encouraging State agencies to pursue energy performance contracts[2], facilitate renewable energy generation, decrease water consumption, set sustainability standards for State facility leases, purchase electric and alternative fuel vehicles, pursue LED lighting retrofits, prioritize environmentally preferred purchasing policies, and establish a Greening Government Leadership Council (GGLC). The Office chairs the GGLC, which coordinates the State's efforts to meet the statewide sustainability goals to reduce greenhouse gas emissions, reduce water use, and accelerate the use of clean energy technologies for State-owned assets.

Most recently, Governor Polis signed Executive Order D 2023 03 to further greening government efforts and find opportunities to reduce energy and water consumption in State buildings and fleets. The Executive Order also created the Office of

[2] Energy Performance Contracting is a financing method that allows eligible applicants, such as State agencies, to implement energy conservation and renewable energy measures with little or no upfront cost investment. The resulting utility and maintenance cost savings are used to pay for the improvements and fund facility maintenance and upgrades.
Source: Colorado Energy Office EPC Program

Sustainability to work across State government to advise and support State capital planning, procurement, and operations aligned with these goals and to encourage efficient implementation. Executive Order D 2023 03 also tasks the Office with phasing out the use of petroleum-powered push and hand-held lawn and garden equipment and developing a water-efficient landscape policy for State facilities.

Prior to this recent Executive Order, Executive Order D 2022 016 outlined greening government goals in greenhouse gas emissions, energy use, renewable energy consumption, and water use. This EO also directed State agencies to pursue numerous sustainability efforts, including cost-effective energy management strategies, fleet electrification, water efficiency improvements in buildings and landscaping, and environmentally preferred purchasing policies.

The Office of Sustainability furthers the State's greening government practices by providing leadership and accountability for sustainability metrics and efforts. Senate Bill 24-214 funds the Office within the Department of Personnel & Administration. SB24-214 charges the Office to coordinate and assist State agencies in ongoing sustainability initiatives, including, but not limited to, water reduction initiatives, energy efficiency in buildings, transition to electric lawn equipment, and coordination of electric vehicle charging infrastructure. The Office is also involved in tracking financial savings gained from sustainability initiatives and seeking further federal support for sustainability projects.

In its first year of operation, the Office of Sustainability has already filed for $1.2 million in revenue from federal direct pay tax credits as a result of the Inflation Reduction Act (IRA). These were predominantly electric vehicle tax credits. Direct pay is a new mechanism that allows nonprofit entities, including state governments, to receive cash payments for federal tax credits across a wide variety of technologies including clean vehicles and clean energy. The Office of Sustainability will continue to work to maximize Colorado's utilization of these and other federal funds, further reducing operating costs and State government expenditures on critical projects.

Statewide Goals and Progress

The following are the goals outlined in Executive Order D 2022 016:

- Reduce greenhouse gas emissions from State operations by at least 26% by the end of FY 2024-25 over the FY 2014-15 baseline.
- Reduce greenhouse gas emissions from State vehicles by at least 15% by the end of FY 2024-25 over the FY 2014-15 baseline.
- Reduce greenhouse gas emissions from State vehicles categorized as special use by at least 7.5% by the end of FY 2024-25 over the FY 2014-15 baseline.[3]
- Reduce energy use per square foot in State facilities by at least 15% by the end of FY 2024-25 over the FY 2014-15 baseline.
- Ensure that at least 7% of total electricity consumed by State facilities is renewable by the end of FY 2024-25.
- Reduce potable water consumption by at least 2% by the end of FY 2024-25 over the FY 2014-15 baseline.

Progress on Sustainability Goals

As summarized in the table below, State Agencies have largely achieved the targets set by Executive Order D 2022 016.

[3] Special use vehicles are defined as Colorado State Patrol vehicles and Colorado Department of Transportation (CDOT) snow plows.

Sustainability Goal Area	FY 2014-2015 Baseline Data	FY 2024-2025 EO D 2022 016 Target	Goal Status with FY 2022-2023 Data[4]
GHG Emissions (State Operations)	283,036 metric tons GHG	-26% over the FY 2014-15 baseline	Achieved -30% as of FY 22 - 23
GHG Emissions (State Fleet)	42,912 metric tons of GHG	-15% (regular vehicles) over the FY 2014-15 baseline	Achieved -18% as of FY 22 - 23
GHG Emissions (State Fleet)	29,546 metric tons of GHG	-7.5% (special use vehicles) over the FY 2014-15 baseline	Achieved -13% as of FY 22 - 23
Potable Water Consumption	1,171,759 kgal	-2% over the FY 2014-15 baseline	Achieved -15% as of FY 22 - 23
Energy Use Per Square Foot in State Facilities	132.99 kbtu/SF	-15% over the FY 2014-15 baseline	In Progress -7% as of FY 22 - 23
Renewable Energy Consumption	0%	7%	In Progress 1.12% as of FY 22 - 23

Statewide Sustainability Goals and Strategies for FY 2025 to FY 2034

Building on the achievements to date and an analysis of potential future strategies that the State can take, the Office is proposing new goals to increase sustainable government practices, find operational savings, and reduce Colorado State government's impact on the environment. Building on past Executive Order

[4] The Office of Sustainability was unable to report FY 23 - 24 GHG emission data due to the division of the software platform, EnergyCAP, into three distinct products, which temporarily impacted data calculations. The Office of Sustainability is actively working to restore GHG reporting capabilities and we expect the data to be available by April 2025.

directives, the goals listed in the table below alongside the strategies to achieve each goal, include further GHG emissions reductions, as well as decreases in both energy and water usage by State agencies.

1. Goal 1: Reduce GHG Emissions by 50% in State Operations by FY 2034 over the FY 2019 baseline

    1.1. Facilitate Energy Performance Contracts

    1.2. Develop Metrics and Goals to Support Environmental Progress

    1.3. Support the Implementation of Buy Clean Colorado Act

    1.4. Pursue Opportunities to Generate Clean Energy on State Facilities and Land

    1.5. Electrify Lawn Equipment

2. Goal 2: Reduce GHG Emissions by 32% in the State Fleet by FY 2034 over the FY 2019 baseline.

    2.1. Increase Purchase and Utilization of Clean Fleet Vehicles

    2.2. Pursue Statewide Build-Out of EV Charging Infrastructure

3. Goal 3: Reduce energy use per square foot in State facilities by 20% by FY 2034 over the FY 2019 baseline.

    3.1. Incentivize High Efficiency Energy Projects in the Budgeting Process

    3.2. Evaluate and Prioritize Facility Upgrades

    3.3. Support High Performance Buildings Program

4. Goal 4: Reduce potable water consumption by 20% by FY 2034 over the FY 2015 baseline.

    4.1. Facilitate State Construction Mandates and Procedures

    4.2. Provide Irrigation Audit Training

5. Goal 5: Secure at least $13 million of federal tax credits for clean energy projects by FY 2034.

    5.1. Apply for Inflation Reduction Act Elective Pay Credits

Greenhouse Gas Emissions (GHG) from State Operations

Goal 1: Reduce GHG Emissions by 50% in State Operations by FY 2034 over the FY 2019 baseline.

The State will join the Department of Energy's Better Climate Challenge, which establishes aspirational goals to reduce scope 1 and scope 2 emissions across State operations by 50% and build a State-wide plan with GHG targets[5]. The State also joined the White House Council on Environmental Quality's Government Scope 3 Alliance to share best practices for scope 3 emissions reductions and set a future scope 3 reduction target[6].

State facilities and operations from State buildings account for 70% of State GHG emissions through the consumption of electricity and natural gas, while 30% of State emissions are attributable to diesel and gasoline use in the State fleet. While the Office is measuring emissions across scopes 1 and 2, with plans for scope 3 reductions in the future, the primary short-term focus is on scope 1 and 2 emissions – direct emissions from sources the State owns and controls, including fleet vehicles and

[5] "Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles). Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling." Source: EPA Scope 1 and 2 Guidance

[6] "Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization that the organization indirectly affects in its upstream and downstream activities (e.g. purchased goods and services, business travel, leased assets)." Source: EPA Scope 3 Guidance

facility energy use, and purchased electricity. By targeting these areas, the State of Colorado can address the largest sources of emissions influenced by State capital planning and purchase decisions and continue to make the most immediate and measurable progress toward long-term sustainability goals.

Progress on GHG Reduction in Facilities

To date, agencies have undertaken numerous initiatives that contribute both to greenhouse gas emission and energy use reductions in facilities. The following are examples of successful sustainability initiatives:

- The Department of Agriculture retrofitted their main campus in Broomfield with LED lighting.
- The Department of Corrections installed LEDs to bring facilities close to 100% LED conversion and replaced older air handling units. An analysis of the East Canon City Correctional Complex shows a steady decline of daily kilowatt hours of electricity used due to LED retrofitting. The decline fluctuates depending on seasonality but has resulted in approximately 25,000 fewer kilowatts of electricity used per day.
- The Department of Transportation prioritized the completion of 166 LED building lighting retrofits and performed improvements at several rest areas and maintenance sheds.
- The Department of Human Services earned a LEED Gold certification for the Prairie Vista Youth Services Center and completed heating, ventilation, and air conditioning (HVAC) upgrades in four facilities.[7]

[7] Source: USGBC LEED Rating System

- The Department of Personnel & Administration completed LED retrofitting throughout Capitol Complex buildings.
- The Department of Public Safety replaced HVAC units at Fort Collins and Castle Rock facilities with high efficiency units.

To further greenhouse gas emissions reduction, the Office of Sustainability will collaborate across agencies to streamline investments, share best practices, and advise on operational planning to achieve GHG emissions reduction targets.

The following sections detail specific strategies to reduce GHG Emissions in State Operations:

1.1 Facilitate Energy Performance Contracts

The Office of Sustainability will work with the Office of State Architect (OSA) and the Colorado Energy Office (CEO) to identify buildings that are prime candidates for energy performance contracts (EPCs). Through an EPC "road show" and targeted building electrification training programs in collaboration with CEO, the Office will educate facility managers, budget personnel, and decision-makers on the use of energy performance contracts and investment grade audits. The Office will also collaborate with CEO to maximize the EPC Revolving Loan Fund and utilize up to $300,000 in the fund for investment-grade audits to cover approximately 1.2 million square feet of State-owned property.

Colorado's EPC program began in 1996, and to date, State facilities have realized over $25 million in cost savings for controlled maintenance requests.[8] Currently, the following State agencies are implementing EPCs:

[8] Source: FY25-26 OSA Annual Report

- Colorado Department of Human Services
- Department of Corrections
- Department of Personnel & Administration
- Department of Natural Resources

Going forward, the Office will pursue a portfolio approach for EPCs across facilities. EPCs benefit from a portfolio approach where private energy-as-a-service companies[9] evaluate various building system upgrades across a number of buildings in a particular geographic area. Unlike the current practice, where a single agency with facilities spread throughout the State may pursue one-off EPCs, this regionalized approach allows candidate buildings across multiple agencies to be considered simultaneously for upgrades and financing. By pursuing regional energy performance contracts across agencies, the Office will identify and help fund the upgrade and replacement of equipment leading to utility, maintenance, and cost savings across State facilities. With participation from agencies, the Office can help prioritize capital improvement opportunities and deferred maintenance needs to alleviate budget constraints.

Furthermore, the Office will develop a facilities inventory with detailed energy efficiency scores and evaluate energy efficiency investment opportunities. These efforts will result in more modernized performance and equipment, reducing operating costs and emissions. They can also provide an alternative financing approach to critical building upgrades and improvements, supporting the various missions of State government agencies and the people they serve.

1.2 Develop Metrics and Goals to Support Environmental Progress

The Office will support State agencies in their adoption of energy efficiency measures, upgrades, and data collection. This will help further sustainability goals at

[9] Energy-as-a-service companies provide a combination of building engineering support and access to financing.

facilities and allow for accurate tracking of the goals outlined in this plan. Doing this well will likely require additional staff time and potential hiring of new staff. The Office will work with agencies to pursue a range of options, including grant funding, innovative funding structures, AI technology pilots to automate workstreams, or potential budget requests in future years. For example, additional capacity is critical in providing accurate and ongoing data to measure State agency-wide environmental impacts in EnergyCAP, the State's energy and sustainability management software. With accurate utility data and reliable energy tracking, the Office will develop a dashboard to showcase agencies' greening government performance and determine areas in need of support. The platform will also allow the Office to track utility bill savings and other benefits of various projects and interventions.

1.3 Support the Implementation of Buy Clean Colorado Act

The Buy Clean Colorado (BCCO) Act requires contractors to meet Global Warming Potential (GWP) standards for certain eligible materials utilized in State public construction projects of $500,000 or greater. The Office of the State Architect was directed to establish GWP limits for several categories of eligible materials, including asphalt and asphalt mixtures, cement and concrete mixtures, glass, post-tension steel, reinforcing steel, structural steel, and wood structural elements. Additionally, the Colorado Department of Transportation was directed to establish GWP limits for materials used in public projects, including roads, highways, and bridges. For public projects that began design solicitation on or after Jan. 1, 2024, the awarded contractor must submit a current product-specific Environmental Product Declaration (EPD) that demonstrates compliance with OSA's GWP limits for each eligible material specified for the project. The Office will support OSA's and CDOT's buy clean efforts by engaging with other states and the federal government on buy clean policies and developing market inventories of lower-emissions building materials, including those created by Colorado companies, to provide demand support for lower carbon material.

1.4 Pursue Opportunities to Generate Clean Energy on State Facilities and State Land

As State agencies continue to pursue the installation of photovoltaics, subscriptions to community solar gardens, and geothermal technologies, the Office will partner with agencies to close informational gaps and identify financing and procurement strategies to advance clean energy opportunities on State property. In partnership with the Greening Government Leadership Council, the Office will work with subject matter experts to provide staff training on solar subscriptions, power purchase agreements (PPAs), and other financing methods for renewable energy projects. By working with OSA to identify land viable for solar or other renewable energy sources, the Office can partner with agencies and utilities to pursue renewable energy projects on State land. The Office can also explore PPAs with agencies and third-party developers to determine suitable ways to fill in the gaps in knowledge and budget for the construction and maintenance of renewable energy resources.

The Office of Sustainability will work to advance the Colorado Microgrid Roadmap 1.0, facilitating the integration of battery energy storage and microgrids on critical State facilities. These efforts provide two benefits:

1. They help to store renewable energy so it can be used when needed.
2. They support continuity of operations in the event of a broader power system failure.

To date, agencies have undertaken the following renewable energy initiatives at State facilities:

- The Department of Transportation subscribes to two community solar photovoltaic gardens and has one 125 kWp rooftop system.
- The Department of Personnel & Administration has two existing rooftop solar photovoltaic systems: 100 KVA at 1881 Pierce St. in Denver and a 10 KVA at the

Governor's Residence at the Boettcher Mansion. The Department of Personnel & Administration is currently undergoing an EPC for further installation of photovoltaic systems at State-owned facilities. The Office of Sustainability is also collaborating with the Department of Local Affairs to pursue solar at Fort Lyon and Ridgeview.[10]

- The Department of Corrections leases solar in Buena Vista for 48,000 kWh and utilizes power purchase agreements to receive solar production credits of 1.2 million kWh for the East Canon City Prison Complex, San Carlos Correctional Facility, Colorado Territorial Correctional Facility, Arkansas Valley Correctional Facility, and Denver Correctional Facilities, as well as a solar garden subscription for 1.1 million kWh at Sterling Correctional Facility.

- The Department of Human Services currently operates three solar photovoltaic installations and is undergoing an EPC to pursue solar photovoltaic systems projected to offset 15% of the Department's electricity consumption.

- The Colorado State Land Board within the Department of Natural Resources hosts 23 solar projects on 2,511 acres and 18 wind projects encumbering approximately 365 acres, which provide approximately 577 MW of electrical generating capacity annually.

Electrify Lawn Equipment

Executive Order D 2023 018 directed the Colorado Department of Health and Environment (CDPHE) and Department of Personnel & Administration (DPA) to phase out State agency use of gas-powered push and hand-held lawn and garden equipment with internal combustion engines that are less than 25 horsepower in the ozone

[10] These facilities are managed by the Department of Local Affairs and owned by the Department of Personnel & Administration.

nonattainment area[11] and to explore the feasibility of expanding this phase-out to all State operations. If left unchecked, gas-powered lawn and garden equipment will account for 11% of total air pollution emissions that form ground-level ozone in the northern front range of Colorado.[12]

According to Executive Order D 2023 018, the phase-out should be completed to the maximum extent possible with current funds by June 1, 2025. The Air Quality Control Commission adopted Regulation 29, restricting the use of small hand-held lawn and garden equipment between June 1 and August 31, when Colorado typically sees higher ozone pollution levels. Beginning June 1, 2025, Regulation 29 restricts State agency use of gas-powered push and hand-held lawn and garden equipment with an internal combustion engine smaller than 25 horsepower from June 1 to August 31 each year. To assist with the phase out of gas-powered equipment, the Office created a lawn equipment matching fund to provide 50% reimbursement to agencies purchasing electric lawn equipment. This fund will offset some of the costs associated with electric lawn equipment conversion and incentivize agencies to purchase equipment with less detrimental ozone impact.

Adopt Clean Vehicles in the State Fleet

Goal 2: Reduce GHG Emissions by 32% in the State Fleet by FY 2034 over the FY 2019 baseline.

As of December 1, 2024, the State currently has 680 alternative fuel fleet vehicles contributing to an approximate reduction of 3,000 GHG metric tons of emissions in the State fleet.[13] Alternative fuel vehicles include E-85, Hybrid, PHEV (Plug-in Hybrid Electric), and BEV (Battery Electric Vehicle). Assuming the acquisition of 200

[11] Source: Map of Ozone Non-Attainment Zone

[12] Source: CDPHE Emissions Reduction Strategies for Lawn and Garden Equipment

[13] Source: EPA GHG Calculator

alternative vehicles on an annual basis, this will result in approximately half of the State fleet converting to alternative fuel vehicles and a 32% reduction of greenhouse gas emissions in the State fleet over the FY 2019 baseline.

The following sections detail specific strategies to reduce GHG Emissions from State Fleet:

2.1 Increase Purchase and Utilization of Clean Fleet Vehicles

Colorado Department of Transportation electric street sweeper.

State governments and other nonprofits are now eligible to receive federal tax credit incentives for BEVs, PHEVs, and electric vehicle infrastructure through elective pay rebates.[14] To date, the Office applied for over $1 million in tax credit incentives for vehicles and infrastructure placed in service in 2023 and will continue to apply for applicable tax credits.

[14] Source: IRS Clean Energy Elective Pay Credits

The Department of Personnel & Administration's State Fleet Management plans to acquire a total of 1,250 alternative fuel vehicles by 2027, which accounts for approximately 50% of EV-eligible vehicles. The State has already acquired EVs for many of the more obvious EV uses. To achieve continued increases in EV adoption, the Office will need to work closely with State leaders to ensure a common understanding of the operational capabilities and limitations of EVs and to address those outstanding operational challenges standing in the way of further adoption. While issues are often agency-specific, several factors contribute to the underutilization of electric fleets in Colorado's State fleet. These include improper usage, such as leaving EVs at a low charge level in the State Fleet, a lack of charging infrastructure, and a need for greater training for fleet drivers. Additionally, in some cases, there simply are not yet EVs capable of meeting the necessary performance requirements (e.g., for street sweepers or continuous range requirements for certain law enforcement vehicles).

To address these barriers, the Office of Sustainability will develop a comprehensive strategy that includes the following elements: a plan and training on how to properly use EVs, strategies for funding charging infrastructure, and decision frameworks which can be used to assess whether a use case is a viable one. For example, these frameworks can help to identify where a hybrid vehicle is preferred over a battery electric vehicle. This comprehensive strategy will be developed with the support of the Colorado Energy Office, State Fleet Management, and representatives from the Greening Government Leadership Council. Part of the development of this plan will include a survey to investigate barriers to EV use by the State of Colorado. Along with collecting quantifiable data, this survey will solicit direct feedback from drivers of fleet EVs on their experience and what training and resources would be useful to them.

The Office will also conduct a survey to investigate barriers to EV use for State personnel (i.e., lack of awareness of charging infrastructure, inexperience with

regenerative braking, and more detail about operational use cases) and work with the CEO to develop a strategy for overcoming the barriers.

2.2 Pursue Statewide Build-Out of EV Charging Infrastructure

The Office of Sustainability will support State Fleet Management in the fleet electrification analysis from Sawatch/WEX. Sawatch Labs, recently acquired by WEX, is a fleet electrification software firm which uses EV analytics to determine electrification suitability and assist with EV charging infrastructure planning. The Office will partner with the CEO and State Fleet Management, using the results from the fleet electrification analysis to work with agencies and develop a fleet electrification plan. The plan will include, at a minimum, priority locations for charging stations, agency funding needs, available State and federal grant dollars for charging stations, utility restraints and rebates, and public- or private-sector strategies to plan, install, and maintain EV charging infrastructure.

The Office will establish a joint effort to provide technical assistance and strategic guidance to agencies who are interested in seeking grant funding to build more electric vehicle charging stations. State agencies are eligible for up to $500,000 of competitive grant funding per application round from the CEO's FleetZero Grant program for private depot charging, public and semi-public fleet charging, and fleet charging-as-a-service. Agencies are also eligible for up to $250,000 of competitive grant funding per application round from the CEO's Charge Ahead Colorado grant program for community-based Level 2 and direct current fast-charging electric vehicle charging stations.[15]

[15] Level 1 chargers "provide charging through a common residential 120-volt AC outlet. Level 1 chargers can take 40-50+ hours to charge a BEV to 80% from empty and 5-6 hours for a PHEV." Level 2 chargers offer "high-rate AC charging through 240V or 208V electrical service.

The Office will also consider and pilot innovative models such as charging-as-a-service to further expand charging infrastructure in the State and manage large-scale charging investments, including maintenance. In collaboration with State agencies, the Office will develop a budgeting tool to assist agencies with EV charging infrastructure planning, and operations. The Office will also work with agencies to develop a rate structure to recoup some of the electricity costs associated with charging.

Level 2 chargers can charge a BEV to 80% from empty in 4-10 hours and a PHEV in 1-2 hours." Direct current fast charging (DCFC) equipment "offers rapid charging..and can charge a BEV to 80% in just 20 minutes to 1 hour." Source: Transportation.gov

Beam charging station at the Department of Corrections East Canon City Prison Complex.

Invest in Energy Efficiency in State Facilities

Goal 3: Reduce energy use per square foot in State facilities by 20% by FY 2034 over the FY 2019 baseline.

As part of the Federal Department of Energy Better Climate Challenge, the State seeks to achieve a 20% reduction in energy use per square foot in State facilities by FY 2034 from a 2019 baseline. Over 28 million square feet of the State's owned and leased buildings fall under the Greening Government Executive Order D 2022 016, suggesting significant potential for energy savings across State facilities. The State will participate in a working group with the Department of Energy and share information on energy use reduction strategies with other states and municipalities to make long-term energy use reductions across State-owned facilities.

The following sections detail specific strategies to improve energy efficiency in State Facilities:

3.1 Incentivize High Efficiency Energy Projects in the Budgeting Process

Energy use per square foot reduction is one goal in Executive Order D 2022 016 that has not been accomplished. Some of the necessary energy efficiency improvements will be achieved through strategies already outlined in the GHG section of this plan. This section outlines additional strategies the Office will pursue specific to energy efficiency. One of the main hurdles for this goal is the lack of State funding and the difficulty prioritizing energy projects in the capital budgeting process. The Office will work with OSA and the Office of State Planning and Budgeting (OSPB) to incentivize measures in the capital budgeting process that ultimately impact energy use in facilities. This will include coordination with OSPB to identify scoring metrics for

projects based on energy performance, among other considerations, and consult with OSA and agencies on opportunities to provide capital requests consistent with the Office's mission and Greening Government directives.

3.2 Evaluate and Prioritize Facility Upgrades

The transition to LED lighting, building automatic systems, weatherization, and high-efficiency heating and cooling all present opportunities for State government to reduce operating costs, increase occupant comfort and productivity, and reduce the use of fossil fuels in State facilities. A major barrier to the investment in these building modernization projects stems from the lack of access to the facility-specific analysis to identify candidate projects and the use of financing to allow energy savings from the projects to pay off upfront costs. The Office aims to partner with agencies to identify candidate facilities, analyze prospective projects, coordinate access to third-party engineering, design, and financing services, and monitor and report on statewide progress in terms of utility bill savings and emission reductions. It is important to note that agencies with utility appropriations can roll forward unspent funds for energy-efficiency work.

Executive Order D 2022 016 directs agencies to identify and pursue energy efficiency improvements that are cost effective when comparing the net-present value energy cost and the costs of greenhouse gas emissions using a social cost of carbon and methane formula consistent with Colorado Revised Statute 40-3.2-106(4). EO D 2022 016 also directs agencies to identify and evaluate options that maximize cost-effective energy efficiency heating, ventilation, and air conditioning (HVAC) systems, including use of geothermal systems for any major capital investments.

3.3 Support High Performance Buildings Program

The High Performance Certification Program (HPCP) standards were adopted by the Office of the State Architect to establish the design and construction guidelines for new buildings or the substantial renovation of existing buildings. The U.S. Green

Building Council/Leadership in Energy and Environmental Design (USGBC/LEED) was selected as the preferred sustainable building guideline, with "Gold level certification" as the targeted goal of HPCP. With approval from OSA, a project can use any sustainable building guideline that includes a third party verification process and meets Colorado sustainable priorities. The Office will support OSA by creating educational opportunities for facility managers on the requirements of the HPCP policy. The HPCP policy also applies to any Department of Education and Department of Local Affairs grants for the construction of new buildings or the substantial renovation of existing buildings where the State provides over 25% of the funds for the project.

The Colorado State Capitol is designated as a LEED Gold facility.[16]

[16] Source: USGBC Colorado State Capitol

Potable Water Consumption

Goal 4: Reduce potable water consumption by 20% by FY 2034 over the FY 2015 baseline.

As the Colorado Water Plan describes, population growth, long-term warming trends, major wildfires, aridification, and multi-year droughts are putting a strain on Colorado's water system. Practicing wise stewardship of Colorado's water is a multi-stakeholder effort, and the State plans to lead by example by prioritizing water conservation measures. The Office will prioritize water conservation measures at agencies with the highest irrigated square footage and potable water consumption. Water conservation measures may include water-wise landscaping, efficiency improvements to landscaping, or indoor water efficiency measures. Agencies are only now starting to convert irrigated land to water-efficient landscaping. The Office will provide best practices, training opportunities, and assistance with funding opportunities to further help maintain and improve Colorado's water resources.

As shown in the table below, State agencies use over 990,000 kilogallons of potable water and irrigate over 14 million square feet of State property each year. As of FY 2022-23, State agency water consumption was 15% lower than the FY 2014-15 baseline. Based on recent agency water plans, the Office believes agencies can achieve an additional 5% over the next ten years.

Irrigated Square Foot and Potable Water Consumed by Agency

Agency	Irrigated Square Foot	Potable Water Consumed (Kgals) FY 22-23
CDHS	8,000,000	638,544
CDOC	2,365,308	287,028
CDOT	1,811,175	No Data

Agency	Irrigated Square Foot	Potable Water Consumed (Kgals) FY 22-23
DOLA	914,760	16,026
CDPA	643,122	22,174
CDE	458,251	No Data
DMVA	385,346	7,826
DNR	145,400	5,331
HC	81,000	1,746
CDA	9,743	15,038
CDOR	3,500	No Data
CDPS	No Data	No Data

Notes

- Irrigated Square Foot Data: CPDHE leases their facility and CDPS data collection is ongoing. This data was collected as of March 2024. Agencies are actively removing irrigated landscaping.
- Potable Water Consumed Data: CDOT, CDE, CDOR and CDPS data collection is ongoing.

The following details specific strategies to reduce water usage by State agencies:

4.1 Facilitate State Construction Mandates and Procedures

Executive Order D 2023 03 directed the Office to develop a water-efficient landscape policy for new construction and substantial renovation projects. This policy restricts high water use vegetation in underutilized and nonfunctional landscape areas and requires installation of water-wise landscaping to conserve shared water resources. To support this effort, the Office created procedures offering guidance for landscape

personnel to follow. In order to ensure landscape personnel are equipped to manage and plan for water-efficient landscaping, the Office is currently partnering with the Colorado State University Extension to create a water-efficient landscape training program for State landscape personnel.

Xeriscaped area at the State Services Building.

4.2 Fund Irrigation Audit Training

The Office will seek grant funding with the Colorado Water Conservation Board and water utilities to send landscape personnel to landscape irrigation audit training (i.e., QWEL training). By learning to effectively perform irrigation audits, landscape personnel can use water efficiently, detect leaks, reduce runoff, and install efficient irrigation equipment. Irrigation audits are an affordable way for the State to save water without having to do costly landscape conversions and maintenance.

Maximize Utilization of Federal Project Funding

Goal 5: Secure at least $13 million of federal tax credits for clean energy projects by FY 2034.

The Office will continue to apply for federal funding and other grant opportunities to support State agencies' capital projects. The funds secured to date already exceed that of the operating costs of the office and will be used for clean energy projects that will actively reduce the cost of State operations. Additionally, pursuit of energy performance contracts will result in utility cost avoidance that can be used for investments in an agency's utility budget needs. Agencies with utility appropriations can roll forward unspent funds for energy efficiency work.[17]

5.1 Apply for Inflation Reduction Act Elective Pay Credits

The Inflation Reduction Act introduced "elective pay" or "direct pay" credits for clean energy technologies, enabling governmental entities to receive payment for qualifying clean energy projects.[18] Eligible awardees, including state governments, must file with the IRS. The Office of Sustainability worked with the State Controller's Office, State Fleet Management, the Colorado Energy Office, the Colorado Departments of Natural Resources, Transportation, and Human Services for tax year 2023 to apply for $1.1 million of direct pay tax credits resulting from State purchases of electric vehicles and charging infrastructure. Currently, elective pay will be available until 2032 and requires an annual application to the IRS for all eligible State government purchases. The following are examples of elective pay credits applying to State operations:

Tax Provision[19]	Description	Credit Amount
Investment Tax Credit	For investments in renewable energy projects, including	6% of qualified investment; 30% if prevailing wage and apprenticeship requirements met; Credit is

[17] Source: C.R.S. 24-75-114

[18] Source: White House Direct Pay

[19] Source: IRS.gov

Tax Provision[19]	Description	Credit Amount
for Energy Property	solar, geothermal, small wind, energy storage, and more.	increased by 10% if project meets domestic content requirements and 10% if located in an energy community
Qualified Commercial Clean Vehicles	For purchasers of commercial clean vehicles to include passenger vehicles, buses, and certain other vehicles for use on public streets, roads and highways.	Up to $40,000 (max $7,500 for vehicles <14,000 lbs)
Alternative Fuel Vehicle Refueling Property	For alternative fuel vehicle refueling and charging property including electric vehicle charging.	6% of qualified investment; 30% if prevailing wage and apprenticeship requirements met

The Office will coordinate the State's elective pay application on an annual basis for qualifying assets, and this money will be deposited into the Inflation Reduction Act Elective Pay Cash Fund to capitalize additional clean energy projects.[20]

Other Sustainability Initiatives

As per Executive Order D 2022 016, the Office will continue to focus State agency efforts to decrease the environmental impact of State government operations in a range of different ways, including through green commuting opportunities, environmentally preferred purchasing practices, and waste diversion through reduction, recycling, reuse, or composting.

[20] Source: SB 24-214

Green commuting/office space optimization

Currently, the State is reducing the State's physical footprint by decreasing State leased and owned space by a total of at least 800,000 square feet by FY 2028. Strategies to supplement this effort include efficiency-improving policies such as offering hoteling office space, establishing regional offices, and right-sizing offices to reflect current demand.

The Office will implement a survey of current green commuting opportunities and other office-related policies across State agencies. The Office can then identify success stories for green commuting opportunities to share across agencies as strategies develop to reduce the State's physical footprint.

Procurement

The Office joined the Sustainable Purchasing Leadership Council (SPLC) to create a benchmark of procurement in the State and a roadmap for a green purchasing guide. The SPLC is a global community of purchasers, suppliers, advocates, and experts dedicated to driving positive impact through the power of procurement. SPLC membership includes a wide range of government, nonprofit, and for-profit organizations. The Office intends to develop sustainable procurement guidelines after gathering agency-specific price agreement data and creating a community of practice with procurement personnel in agencies with large-scale purchasing power. The guidelines shall include checklists for identifying green purchases, sample certifications, language for incorporating green goods and services into solicitations and contracts, and an overview of green purchasing laws, policies, and Executive Orders. Products with green guidelines may include cleaning equipment, electronic equipment, furniture, energy-related equipment, food service equipment, office supplies, safety/PPE supplies, building materials, and more. The green purchasing guide will also include preferences for post-consumer recycled (PCR) content products (e.g. recycled paint, furniture made with recycled materials). The Office shall

establish best practices for the end market use of locally-generated compost on State property and construction projects, notably managed by CDOT, OSA and DPA.

Colorado law (C.R.S. §24-103-904) allows a 5% preference for the purchase of environmentally and socially preferable products. In some cases, the allowed preference may exceed 5% if a Life Cycle Cost analysis establishes that the purchase will result in long-term savings.

Waste reduction & diversion

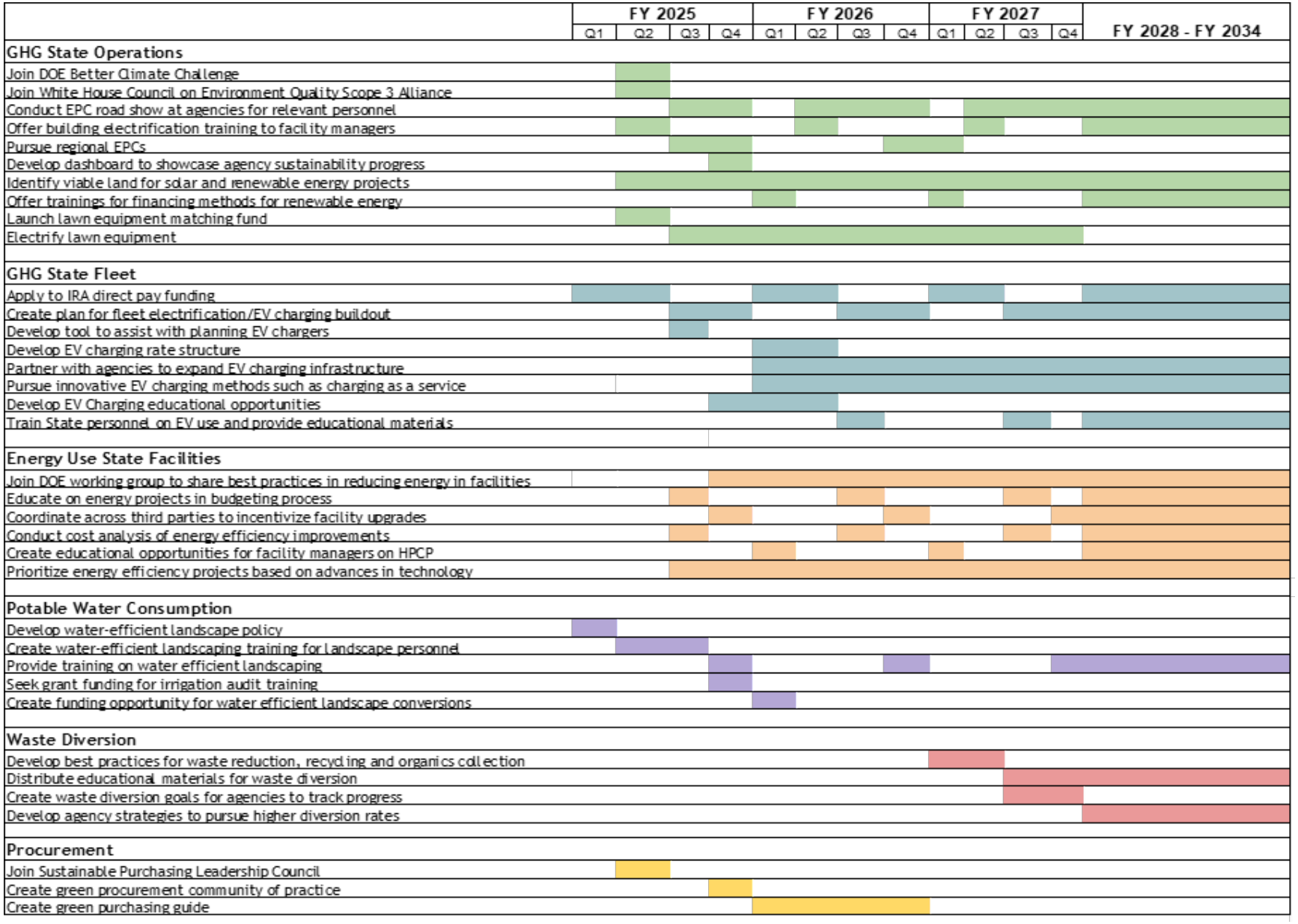
House Bill 22-1355, the Producer Responsibility Program for Statewide Recycling Act, requires companies that sell products in packaging and paper products to fund a statewide recycling system to recycle those materials and sets up a Producer Responsibility Organization. With the Producer Responsibility Organization in development, there will be an opportunity to expand traditional recycling in public places by 2028. Agencies should lead by example and utilize the cost savings in the Extend Producer Responsibility (EPR) program to further waste reduction and diversion efforts in their workplaces. The Office will develop best practices for waste reduction and improved recycling and organics collection at State agency offices. The Office will work with agencies to implement their plans and distribute educational materials. Best practices will be offered for traditional settings, and the Office will collaborate with agencies that have specific needs, such as the Colorado Department of Human Services (CDHS), to create best practices for medical settings. The Office will create waste diversion goals to track agency progress over time and facilitate training opportunities for waste diversion. The Office will also collaborate with CDPHE's Materials Management Unit to train facility managers on conducting waste audits at their own facilities.

Additionally, the Office will work with OSA on updating contract language to reduce construction waste. Currently, general contractors are given the choice to retain any buy-back for materials. This is to add to the competitiveness of construction bidders.

In addition, all new buildings and major renovations are required to meet the high performance certification program, recommending waste reduction, reuse, and recycling as part of the scoring criteria.

Timeline of Implementation

The activities outlined below will be structured in an annual work plan with monthly reporting developed by the Office of Sustainability and relevant agencies. Progress on this work plan will be reported to the DPA Executive Director by the end of each month.


FY 2025
FY 2026
FY 2027
FY 2028 - FY 2034
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
GHG State Operations
Join DOE Better Climate Challenge
Join White House Council on Environment Quality Scope 3 Alliance
Conduct EPC road show at agencies for relevant personnel
Offer building electrification training to facility managers
Pursue regional EPCs
Develop dashboard to showcase agency sustainability progress
Identify viable land for solar and renewable energy projects
Offer trainings for financing methods for renewable energy
Launch lawn equipment matching fund
Electrify lawn equipment
GHG State Fleet
Apply to IRA direct pay funding
Create plan for fleet electrification/EV charging buildout
Develop tool to assist with planning EV chargers
Develop EV charging rate structure
Partner with agencies to expand EV charging infrastructure
Pursue innovative EV charging methods such as charging as a service
Develop EV Charging educational opportunities
Train State personnel on EV use and provide educational materials
Energy Use State Facilities
Join DOE working group to share best practices in reducing energy in facilities
Educate on energy projects in budgeting process
Coordinate across third parties to incentivize facility upgrades
Conduct cost analysis of energy efficiency improvements
Create educational opportunities for facility managers on HPCP
Prioritize energy efficiency projects based on advances in technology
Potable Water Consumption
Develop water-efficient landscape policy
Create water-efficient landscaping training for landscape personnel
Provide training on water efficient landscaping
Seek grant funding for irrigation audit training
Create funding opportunity for water efficient landscape conversions
Waste Diversion
Develop best practices for waste reduction, recycling and organics collection
Distribute educational materials for waste diversion
Create waste diversion goals for agencies to track progress
Develop agency strategies to pursue higher diversion rates
Procurement
Join Sustainable Purchasing Leadership Council
Create green procurement community of practice
Create green purchasing guide

Note: the timeline comprises fiscal year (FY) 2025 through FY 2034. Quarter-level data (Q1, Q2, etc.) is listed only for FY 2025 through 2027.

Greenhouse Gas (GHG) State Operations

- Join Department of Energy Better Climate Challenge and the White House Council on Environment Quality Scope 3 Alliance, Q2 of FY 2025.
- Conduct energy performance contract (EPC) road show at agencies for relevant personnel. Comprises Q3 and Q4 of FY 2025; Q2 through Q4 of FY 2026; and is ongoing from Q2 of FY 2027 through 2034.
- Quarter 2 of each fiscal year: Offer building electrification training to facility managers.
- Pursue regional EPCs: Q3 and Q4 in FY 2025 and from Q4 2026 to Q1 2027.
- Develop dashboard to showcase agency sustainability progress, quarter 4 of FY 2025.
- Identify viable land for solar and renewable energy projects, continuous beginning in Q2 of FY 2025.
- Offer trainings for financing methods for renewable energy in the first quarter of each year, beginning in FY 2026.
- Launch lawn equipment matching fund, Q2 of FY 2025.
- Electrify lawn equipment, from Q3 of FY 2025 to Q4 of FY 2027.

Greenhouse Gas State Fleet

- Apply to IRA direct pay funding, Q1 and Q2 of FY 2025 and each Q1 and Q2 thereafter.
- Create plan for fleet electrification/electric vehicle (EV) charging buildout, quarters 3 and 4 of each fiscal year.
- Develop tool to assist with planning EV chargers, quarter 3 of FY 2025.
- Develop EV charging rate structure, quarters 1 and 2 of FY 2026.

- Partner with agencies to expand EV charging infrastructure, continuous beginning in quarter 1 of FY 2026.
- Pursue innovative EV charging methods such as charging as a service, continuous beginning in quarter 1 of FY 2026.
- Develop EV charging educational opportunities, Q4 of FY 2025 through Q2 of FY 2026.
- Train State personnel on EV use and provide educational materials, Q3 of each year beginning in FY 2026.

Energy Use State Facilities

- Join Department of Energy working group to share best practices in reducing energy in facilities, continuous beginning in Q4 of FY 2025.
- Educate on energy projects in budgeting process, Q3 of each fiscal year.
- Coordinate across third parties to incentivize facility upgrades, Q4 of each fiscal year.
- Conduct cost analysis of energy efficiency improvements, Q3 of each fiscal year.
- Create educational opportunities for facility managers on High Performance Certification Program (HPCP), Q4 of each fiscal year.
- Prioritize energy efficiency projects based on advances in technology, continuous beginning in Q3 of FY 2025.

Potable Water Consumption

- Develop water-efficient landscape policy, Q1 of FY 2025.
- Create water-efficient landscaping training for landscape personnel, Q2 to Q3 of FY 2025.
- Provide training on water efficient landscaping, Q4 of each fiscal year.
- Seek grant funding for irrigation audit training, Q4 of FY 2025.

- Create funding opportunity for water efficient landscape conversions, Q1 of FY 2026.

Waste Diversion

- Develop best practices for waste reduction, recycling and organics collection, Q1 and Q2 of FY 2027.
- Distribute educational materials for waste diversion, continuous beginning in Q3 of FY 2027.
- Create waste diversion goals for agencies to track progress, Q3 and Q4 of FY 2027.
- Develop agency strategies to pursue higher diversion rates, FY 2028 through 2034.

Procurement

- Join Sustainable Purchasing Leadership Council, Q2 of FY 2025.
- Create green procurement community of practice, Q4 of 2025.
- Create green purchasing guide, FY 2026