Greenhouse Gas Emissions (GHG)

Metric tons of carbon dioxide
Greenhouse Gas Emissions – Progress Toward Goal

- 2013 actual: 254,618 MTCO2e, 17.3 million GSF
- 2021 actual: 216,726 MTCO2e, 21.5 million GSF
- 2026 goal: 185,854 MTCO2e, Approximately 22.0 million GSF

CU Strategic Plan start date: 2020
Greenhouse Gas Emissions – Progress Toward Goal

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CU Strategic Plan start date: 2020
Greenhouse Gas Emissions Action Steps

In the Strategic Plan, campuses committed to the following action steps:

1. Update Campus Climate Action Plans with focus on reducing greenhouse gas emissions
2. Look for opportunities to transition to green vehicle fleet
3. Increase the renewable energy mix within campus energy portfolio
4. Identify energy-savings opportunities in capital improvement projects, including deferred maintenance projects
   • Replace legacy equipment with more energy efficient equipment in all spaces including labs, residence halls and offices
**Greenhouse Gas Emissions**

**Examples: Boulder**

1. Climate Action Plan in development, completion planned for fall 2023
   - Originally planned to address Scope 1 and 2 GHG emissions. Will expand to parts of Scope 3
   - Incorporates climate justice as part of evaluation of all recommended strategies

2. Campus on track to replace four buses by 2023
   - Awarded two EPA Diesel Emissions Reduction Act (DERA) grants totaling $1.7 million
     - 45% cost share to purchase four battery electric buses
     - Two battery electric buses went into service November 2022 and two are scheduled for fall 2023

3. Campus solicited energy performance contract earlier this year
   - Currently at 60% of the assessment stage for 18 buildings
     - Goal is to develop a project with 15-year simple payback
   - Assessing potential east campus solar project

4. Capital improvement projects
   - Miramontes Baca Building | planned completion 2023 | addresses $9.7 million of deferred maintenance
   - Engineering North Wing North Tower | completed 2022 | addresses $9.0 million of deferred maintenance
   - Campus replacing legacy equipment where possible
Greenhouse Gas Emissions
Examples: Denver

1. Auraria Campus Draft Campus Climate Action Plan
   • Focused on reducing greenhouse gas emissions
   • Presented to the Auraria Executive Council November 2022
     o Institutional leaders asked to make public commitment to work toward goals

2. Campus on track to phase out gas-powered equipment
   • Replaced gas carts with electric carts
   • Replaced gas-powered grounds equipment with battery-powered equipment

3. Increase the renewable energy mix within campus energy portfolio

4. Identified energy savings opportunities in 2023 Engineering Audit
   • Planned replacement of dated, inefficient cooling units in Business School
   • Planned replacement of obsolete mechanical system in Lawrence Street Center
   • Campus replacing legacy equipment where possible
Greenhouse Gas Emissions
Examples: Anschutz

1. Draft Facilities Masterplan
   • Will inform future Energy Master Plan and Climate Action Plan

2. Campus on track to phase out gas-powered equipment
   • Replaced one fossil fuel vehicle with an electric van
   • Researching gas-to-electric conversions

3. Completed Campus Safety and Emergency Preparedness Facility
   • Expect LEED Net Zero Certification after one year of operation
   • Includes 270kW of solar on roof and covered parking

4. Capital improvement projects
   • Bundled energy project will complete 25 energy conservation measures in 5 buildings
     o Estimated GHG reduction = 4,500 metric tons per year
   • Campus replacing legacy equipment where possible
Greenhouse Gas Emissions
Examples: UCCS

1. UCCS Sustainability Strategic Plan 2030 approved Spring 2022

2. Campus on track to replace one vehicle this year and meet goal of replacing one diesel bus with an electric battery bus by 2026
   - Replaced 2005 Ford Explorer with 2022 Ford F-150 Hybrid
   - Evaluating electric ride-on and stand-up mowers
   - Pursuing several grant opportunities

3. Campus solicited energy performance contract in early 2023
   - Investment Grade Audit (IGA) completed Spring 2023
     - Includes an estimated $3.5 million in capital improvement projects

4. Capital improvement projects
   - Planned improvements to Columbine Hall | lighting upgrades, roof replacement, and new HVAC and controls | addresses $2.3 million deferred maintenance
   - Planned improvements to Engineering Building Renovation | energy efficiency improvements reduce costs by estimated $50,000/year | addresses $13.0 million deferred maintenance
   - Campus replacing legacy equipment where possible