University of Colorado **Boulder**

CLIMATE ACTION PLAN

EXECUTIVE SUMMARY

Call to Action

Actions taken during the next few years will be vital to limiting global temperature rise to 1.5°C and to mitigating the most severe impacts of climate change. According to the Paris Agreement, global GHG emissions need to be reduced 50% by 2030 with a linear reduction to 100% by 2050. This Climate Action Plan (CAP) establishes a course for the University of Colorado's Boulder campus (CU Boulder) to achieve these targets for its own emissions. Greenhouse Gas (GHG) emissions are cumulative, meaning that the sooner reductions are made, the greater the impact and the less difficult it is to make reductions in the future.

The CU Boulder campus seeks to be a leader in pursuing climate action. With the signing of the "American College & Universities Presidents Climate Commitment" (ACUPCC) in 2007, CU Boulder began assembling a formal vision and structure for sustainability governance, one that prioritizes reducing greenhouse gas emissions to net zero as soon as possible. In 2009, the campus published the "Conceptual Plan for Carbon Neutrality" (CPCN); and, though not fully implemented, this document served as an underlying framework for this 2024 Climate Action Plan (CAP). Most recently, the Chancellor has published a ***Call to Climate Action***, committing the campus to carbon neutrality by 2050, among other environmental goals.

With the announcement of the **Right Here Right Now Human Rights Climate Commitments**, CU Boulder has positioned itself as a global leader in advancing human rights as we address the climate crisis. Climate change and the actions we take to mitigate the climate crisis have direct connections to and impacts on inequality, inequity, and injustice, locally and globally. A fair and just transition to a more sustainable CU Boulder demands that we consider how individuals and communities are disproportionately impacted by CU Boulder's operations and the climate crisis more broadly. Reflecting the campus **Diversity, Equity, and Inclusion (DEI)** values, one goal of the CAP is to assess and mitigate the impact of its climate goals and strategies on inequity. This approach allows us to advance climate action while also acknowledging how climate change and climate change mitigation differentially impact individuals and communities based on socio-economic status, race and ethnicity, ability, gender, sexual identity, nationality, geographic location, and a host of other factors. Equity refers to fairness and justice in the distribution of resources, opportunities, and

benefits, as well as the distribution of impacts. We view equity as both a benefit of inclusive climate action and a framework through which climate action can be evaluated. By assessing the impact of the CAP on equity, the campus acknowledges systemic injustices and endeavors to make our efforts more inclusive. Our vision is to ensure that the climate action plan does not worsen inequity and that we prioritize actions that both mitigate the climate crises while advancing the University's equity goals.

Core Goals

This 2024 CAP is organized around **five Core Goals**, reflecting the Chancellor's Call to Action, and intended to strengthen CU Boulder's commitment to climate action.

1. **Achieve 50% reduction in Scope 1 and 2 emissions (see Table 1) by 2030, from the baseline year of 2019, with a linear reduction to zero emissions by no later than 2050.** Do so without the use of purchased offsets or unbundled Renewable Energy Certificates (RECs).[7]

2. **Achieve a 50% reduction from 2019 by 2030 for those Scope 3 emissions where accurate estimates can be established and which are within the University's influence and control. Further reduce these emissions to zero by 2050.** The CAP begins the process of developing a Scope 3 inventory and then developing the strategies to achieve reductions in indirect emissions. It is anticipated that the quality of the inventory and the robustness of the reduction strategies will increase over time now that inclusion of Scope 3 emissions in the CAP is established.

3. **Use climate action to deliver to the CU Boulder community the co-benefits of equity, health, and resilience.** As the opportunity to connect climate action to these co-benefits becomes increasingly apparent, we anticipate additional strategies to be included in subsequent CAPs to do so.

4. **Strengthen internal and external management and accountability structures to ensure the campus achieves the goals outlined in the plan.** An implementation plan that includes governance solutions and accountability structures is also included in this CAP.

5. **Build a Community Engagement Strategy to integrate communication, feedback, and reporting and increase transparency with campus and the broader community.** The implementation plan also includes communication, engagement, and reporting mechanisms in support of campus operations and emission reduction strategies.

[7] RECs are used to track and assign ownership to renewable electricity generation and use. Unbundled REC means the non-physical REC has been separated from the physical electricity. When a REC is unbundled, it may lack the same credibility as a bundled REC. If CU were to use the energy from an off-campus renewable energy plant, under a virtual net metering agreement, the associated "bundled" RECs would count toward reduction goals.

The CU Boulder Climate Action Plan is ultimately a strategy document that outlines a pathway to achieve these stated goals. It begins with an inventory of GHG emissions which establishes a baseline from which to measure and forecast future GHG reductions. It then assesses strategies to achieve emission reductions on campus (Scopes 1 and 2) and through relevant Scope 3 categories. In addition to reducing emissions, these strategies have the potential to achieve certain co-benefits. Therefore, strategies have been identified and prioritized to enhance these complementary aspects, and to protect against possible negative outcomes (e.g., excluding some members of the community from engaging in climate action programs or incentives). Finally, implementation recommendations are included that address governance, communication and financing strategies to help ensure the Plan's execution.

TABLE 1: Working definition of three emission scopes

SCOPE 1	Carbon emissions resulting directly from fuel combustion on campus, primarily natural gas for heating or CU Boulder-owned vehicles.
SCOPE 2	Carbon emissions associated with energy purchased by CU Boulder and generated elsewhere, primarily grid electricity used on campus.
SCOPE 3	Carbon emissions resulting indirectly from CU Boulder operations, either from upstream activities, such as purchases of goods and services, or downstream activities, such as students and faculty commuting to and from campus. The University does not have direct control over these emissions, though it can exert influence over its operations, procurement and other activities to reduce these emissions.

GHG Baseline, Forecasts and Targets

CU Boulder has created an inventory of its Scopes 1 and 2 emissions, and set targets for reductions in those emissions by 2030 and further linearly reducing to zero emissions by 2050. The Campus has also conducted its first ever Scope 3 emissions inventory, covering eight of the fifteen[8] Scope 3 categories[9]. It set targets in six of those categories (purchased goods and services, capital goods, fuel and energy related activities, waste from operations, business travel, employee commuting), with suggestions for expanded reporting for any remaining categories in the future.

Baseline. In 2019, the University produced 130,593 metric tons of carbon dioxide equivalent (MTCO2e) from its scope 1 and 2 activities.[10] This is down from a 2005 baseline of 135,609 MTCO2e, according to CU's records in SIMAP,[11] a reduction of 4.6%. Adding Scope 3, emission estimates increase to 163,027 MTCO2e. Table 2 and Figure 1 summarize CU Boulder's total emissions.

[8] Categories including Category 10 (Processing of sold products) and Category 11 (Use of goods and services sold), do not apply to the Campus value chain since CU Boulder does not sell intermediary products used in manufacturing, nor are there necessarily emissions associated with using one's college degree. Emissions from Category 4 (Upstream transportation and distribution) are currently included in Category 1, which uses a full life cycle emission factor, but will be specifically addressed in future CAP updates. Appendix D, entitled, "Scope 3 Emissions", details the methodology CU Boulder has taken to measure Scope 3 emissions, and lists concrete plans for measuring the remaining categories. The categories included in this CAP align with the campus' core goal of achieving 50% GHG emission reduction in certain Scope 3 emissions by 2030 and all categories by 2050, from a 2019 baseline.

[9] Emissions from "Investments" have also been estimated as an eighth stand alone category, due to the fact that investment decisions are handled at the University System level and not the campus level. An estimate of these emissions can be found in the Scope 3 Appendix.

[10] This figure may differ slightly from other reported estimates of campus emissions, including Campus Sustainability Indicator Management & Analysis Platform (SIMAP) reports. The reason is slightly different reported use data or emission factors. The figure here was created by a proprietary software called Climate and Energy Scenario Analysis, or CESA. CU Boulder will retain the CESA model that has been specifically designed for the campus.

[11] **SIMAP** is a carbon and nitrogen-accounting platform commonly used by universities to track, analyze, and improve campus-wide sustainability.

TABLE 2: Summary of emission totals from Scopes 1, 2, 3 in 2019.

CATEGORY	MTCO2e
SCOPE 1	**48,213**
Natural gas	45,097
Total Fleet	1,841
Fugitive Emissions, Fertilizer Usage, Refrigerant Leakage	1,275
SCOPE 2	**82,528**
Purchased electricity	82,528
SCOPE 3	**163,027**
Category 1: Purchasing	12,216
Category 2: Capital Goods	20,944
Category 3: Fuel and Energy Related Activities	21,782
Category 5: Waste Generated in operations	2,595
Category 6: Business Travel	32,041
Category 7: Employee and Student Commuting	16,407
Category 8: Upstream Leased Assets	538
Category 9: Downstream Transportation and Distribution	56,504

CU BOULDER EMISSION PERCENTAGES BY SCOPE (2019)

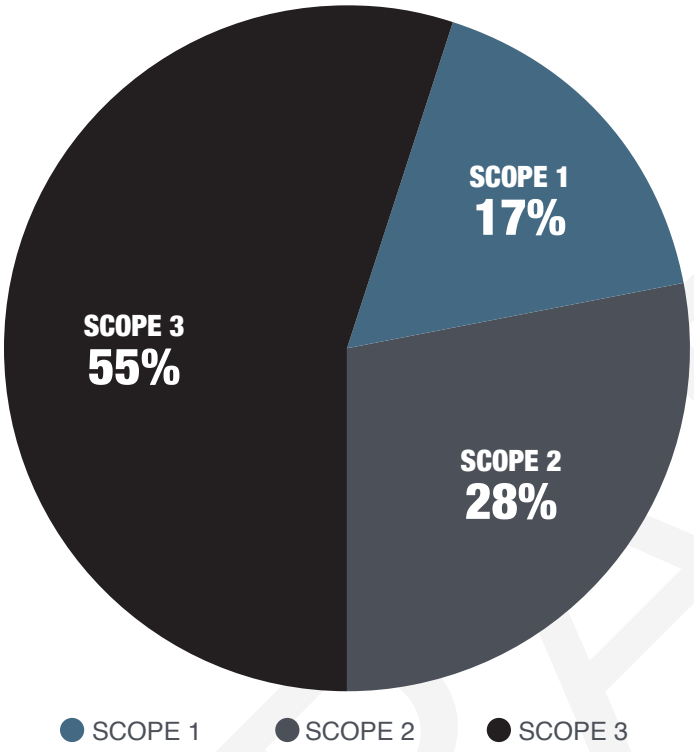


FIGURE 1

Scope 3 consists of 15 distinct categories of emissions as defined by the GHG Protocol. Eight of the categories have been included in CU Boulder's first Scope 3 inventory, some using significant assumptions given the lack of available data. Seven of the categories have reduction targets. The other categories were either not applicable to CU Boulder's operations or fell outside the direct control of CU Boulder.

The seven categories that include targets together represent about 67%, or approximately two thirds, of the calculated scope 3 emissions. These targets reflect a 50% reduction by 2030 and a 7% annual reduction through 2050, which would bring Scope 3 emissions close to zero.

TABLE 3: Summary of Scope 3 Categories that are included in the inventory and for which targets are set.

#	CATEGORY	INVENTORY	TARGET SET
1	Purchased goods and services	Y	✔
2	Capital goods	Y	✔
3	Fuel and energy related activities (FERA)	Y	✔
4	Upstream transportation and distribution	Included in Category 1[12]	
5	Waste generated in operations	Y	✔
6	Business travel	Y	✔
7	Commuting	Y	✔
8	Upstream leased assets	Y	✔
9	Downstream transportation and distribution	Y	
10	Processing of sold products	N/A	
11	Use of goods and services sold	N/A	
12	End-of-life treatment of sold products	N/A	
13	Downstream leased assets	N/A	
14	Franchises	N/A	
15	Investments	Out of CU Boulder direct Scope/Control. See Scope 3 Annex for an estimate.	

[12] These are emissions associated with the transportation and distribution of goods and services (i.e. food, merchandise, etc.) supplied to the university. For this inaugural iteration of a Scope 3 inventory, a life-cycle emissions factor that considers all emissions from upstream products, has been used for Category 1 meaning emissions for category 4 would be included. This will not be the most accurate way of measuring Category 4 emissions, and other strategies will be employed for future CAP updates.

Reducing Scope 1 and 2 Emissions

Several foundational strategies were developed and evaluated to reduce emissions from Scopes 1 and 2.[13] CU Boulder's 2022 Energy Master Plan[14] was used as a guide for many strategies, while their GHG impact, and various financial performance indicators were evaluated in an Excel-based software model called the Climate and Energy Scenario Analysis tool (CESA).[15] Projects were identified under four primary categories: building efficiency and electrification, decarbonization of the campus heating system, onsite and offsite renewable energy, and fleet conversion to electric vehicles. Then, using the CESA model, the CAP Steering Committee developed three carbon reduction scenarios to create a roadmap to meet the established Science Based Targets for CU Boulder.

Figure 2 provides a depiction of each scenario's GHG reduction pathway to 2050. The dotted line represents the 2019 baseline, while a gray dashed line shows the 2005 baseline for comparison. The solid black line is a business-as-usual scenario in which utility-sourced electricity gradually decarbonizes. The black dashed line represents CU Boulder's science based emissions target (SBT).[16] Finally, the colored lines are the three scenarios. The three scenarios are as follows:

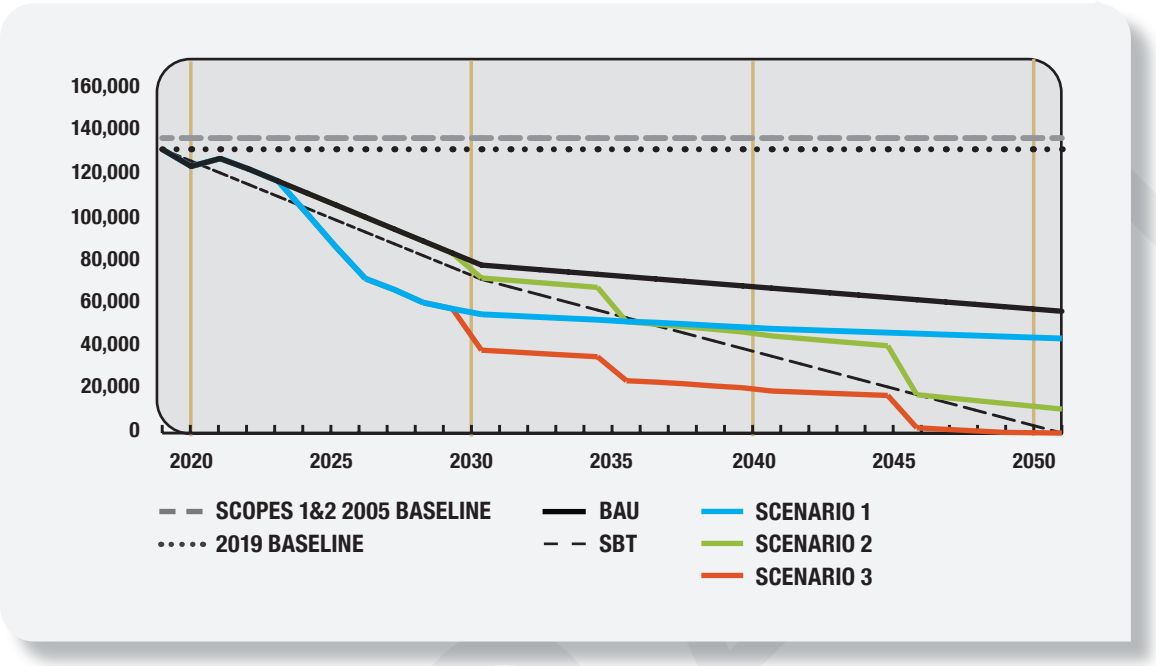
[13] Scope 2 emissions are not technically produced on campus, but at the source of electricity generation. Still, they can be directly controlled on campus by reducing electricity use. Further, as generation sources become less carbon intensive, emissions from all electricity consumption will fall.

[14] CU Boulder Energy Master Plan 2022.

[15] CESA is a proprietary tool of Blue Strike Environmental, a private consultancy. Blue Strike performed the tool customization and has delivered the completed tool to the Boulder Campus. CESA is a comprehensive techno-economic model that helps decision-makers understand the financial, environmental, and energy impacts of a suite of climate and energy mitigation measures. The tool has been designed to reflect the University's energy profile and facilities design, and is used to evaluate multiple strategies to achieve zero GHG emissions.

[16] A Science Based Target (SBT) refers to the emissions pathway for an entity such that it plays its part in keeping global temperature rise below 1.5°C. A SBT for a university such as CU Boulder, can be calculated using a downloadable calculator available from the Science Based Target Initiative (SBTi).

FIGURE 2: Scenario GHG Reduction Pathways for Scope 1 and 2 Emissions



SCENARIO 1 (blue line): Energy efficiency (EE), renewable energy (RE), and Fleet replacement. This Scenario considers over 300 energy efficiency projects (lighting, controls, envelope & HVAC), 7 MW of renewable energy installations, and the replacement of approximately 365 internal combustion campus fleet vehicles with electric vehicles. This combination of projects allows CU Boulder to achieve its short-term goals, but not its long-term goals.

SCENARIO 2 (green line): Heating system upgrade (HSU); this is the phased conversion of Central Campus heating to an electrified, lower temperature hot water system. This complex series of projects is currently being studied; results, including project schedule and costs, are expected in 2024. Decarbonizing the campus heating system is expected to contribute significant emission savings, but will not achieve zero emissions on its own.

SCENARIO 3 (red line): Combines Scenarios 1 and 2. This combination of projects will achieve CU Boulder's short and long term goals, of 50% reduction by 2030 and 100% by 2050.

The CAP recommends that Scenario 3, pictured with the red line, be pursued as the selected pathway to meet the zero emission science based target. This option accelerates short-term emissions reductions through building efficiency, renewable energy, and fleet decarbonization and would reduce Scope 1 and 2 emissions significantly below the science-based target. Scenario 3 saves 1,120,383 MTCO2e between now and 2050. Table 4 outlines the implementation timeline and carbon savings for this scenario, while Figure 3 shows the GHG reductions expected by decade, along with Figure 3 that visualizes the initial costs associated with implementation.

TABLE 4: Implementation timeline and carbon savings by strategy

STRATEGY/DECADE	YEARS 2024–2030	2031–2040	2041–2050
Building Efficiency	466,268 MTCO2e	25,001 MTCO2e	No projects
Renewable Energy	20,066 MTCO2e	No projects	No projects
Fleet Replacement	5,273 MTCO2e	5,434 MTCO2e	2,825 MTCO2e
Heating System Upgrades	83,770 MTCO2e	281,334 MTCO2e	263,629 MTCO2e

ZERO EMISSIONS DEFINITION

Zero emissions means that there are no greenhouse gas emissions produced from a particular source or activity. It indicates a complete elimination of carbon dioxide (CO2) and other greenhouse gas emissions.

Carbon neutrality means that the net greenhouse gas emissions produced by a source or activity are balanced by an equivalent amount of emissions removed from the atmosphere or offset through various measures.

FIGURE 3: Emission Reductions by Decade (MT CO2e)

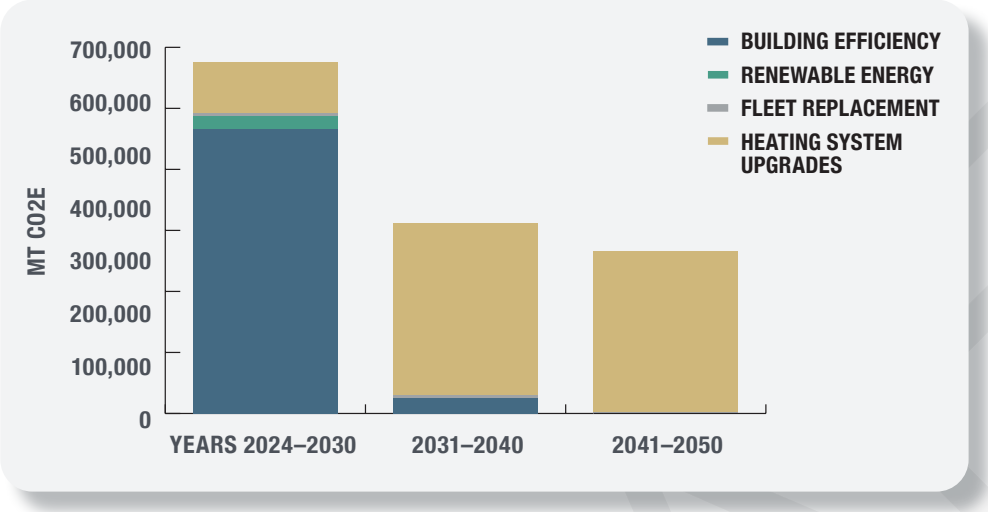
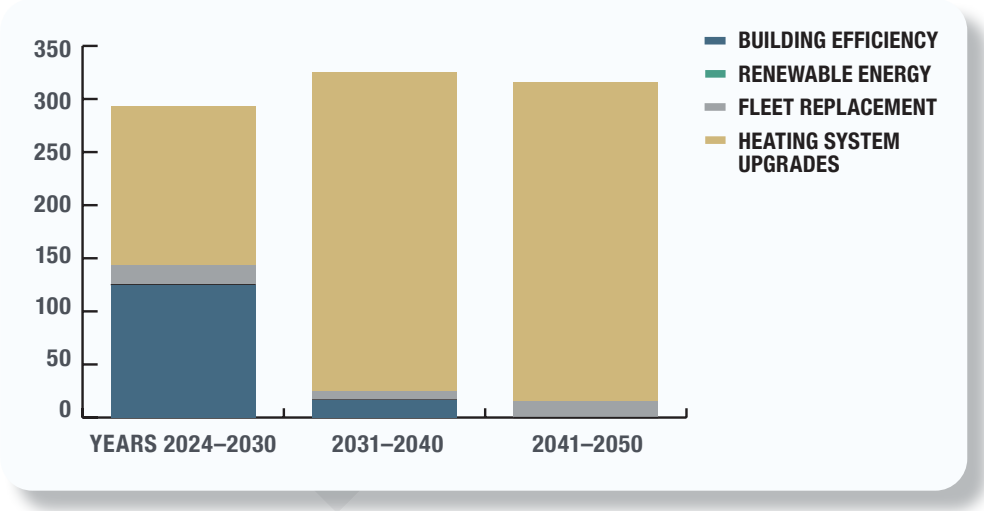


FIGURE 4: Total Investment by Decade (Million USD)



Often a net present value (NPV) is used to provide comparative evaluations of projects. NPVs include investment costs, ongoing operational and maintenance costs, but also cost savings benefits from many of the projects. Other benefits can be estimated by placing a value on the future carbon savings; this is called the social cost of carbon, and has been included in the evaluation to reflect this long-term benefit. Table 5 shows the NPVs of the strategies by decade.[17]

TABLE 5: Implementation timeline and net present value by strategy in millions of dollars

STRATEGY / DECADE	PROJECTS INITIATED IN YEARS 2024–2030	PROJECTS INITIATED IN YEARS 2031–2040	PROJECTS INITIATED IN YEARS 2041–2050
Building Efficiency	64.8	-8.7	No projects
Renewable Energy	0.7	No projects	No projects
Fleet Replacement	-15.7	-5.8	-11.7
Heating System Upgrades	-168.2	-241.9	-166.3

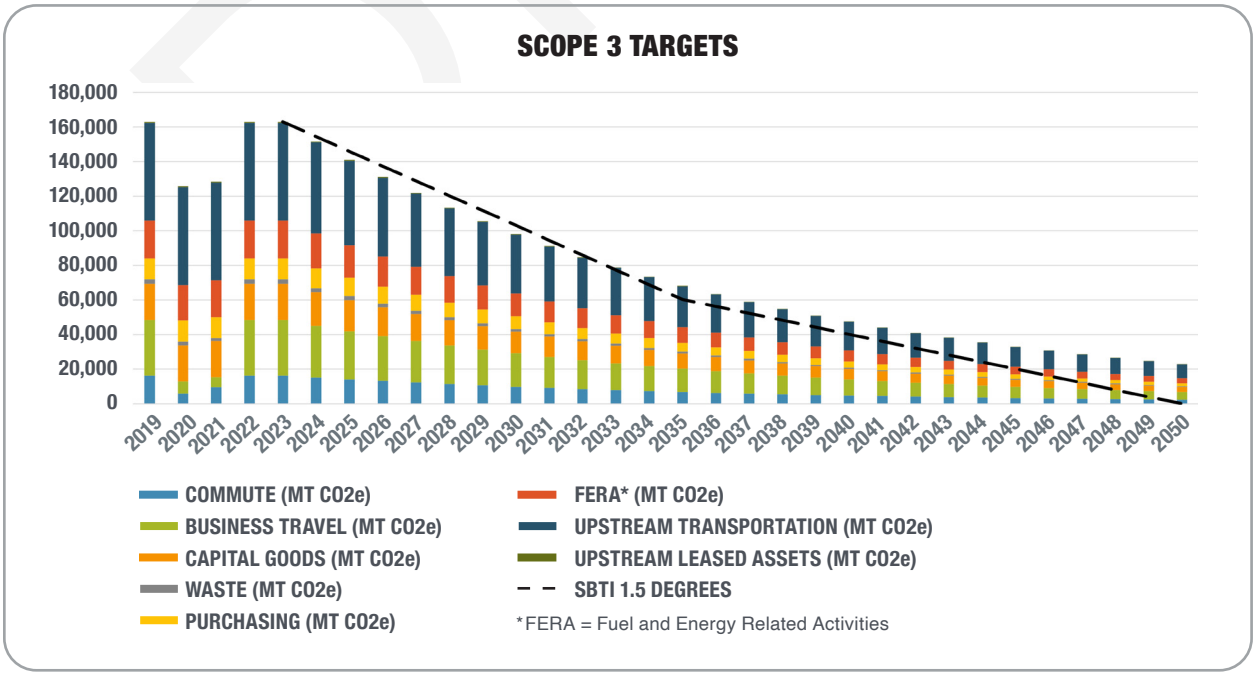
[17] Negative NPVs are often typical of a public institution, which seeks to deliver services and not a return on investment. NPVs compare costs to benefits, and many of the benefits delivered by public bodies are difficult to quantify and therefore absent from the numerical calculations. As a result, NPVs are often used as comparative indicators to differentiate the value of competing projects.

Reducing Scope 3 Emissions

Scope 3 emissions, which are sometimes called value-chain emissions, are produced through the upstream and downstream activities of CU Boulder's operations. While they are "owned" by others (generally, they are others' Scopes 1 and 2 emissions), CU can influence Scope 3 by establishing policies and programs that address the supply chain (e.g., food, building materials, services, or purchased goods), and foster lower impact transportation options (commuting and CU Boulder-related air travel).

For this CAP, strategies for reducing Scope 3 emissions are described at a high level, and are more directional than specific. Additional benchmarking and engagement with the owners of the emissions are required to develop more detailed strategies. However, a consistent annual aim of 7% GHG reductions in each category would closely mirror CU Boulder's goals. The following scenario shows plausible annual percentage-based reductions on the way toward the University's short term and long term goals.

FIGURE 5: Selected Scope 3 Categories and Targets



Co-Benefits

In this Climate Action Plan, "co-benefits" refer to positive outcomes that arise alongside efforts to reduce emissions. Co-benefits are expected from strategies in this plan, and some can be associated with particular strategies. While there are many reasons to take climate action, the CAP focuses especially on the co-benefits of equity, health, and campus resilience outcomes.

Equity: Implementing climate action measures at CU Boulder addresses not only the pressing environmental challenges, but can also serve as a catalyst for promoting equity within the university community. Climate action initiatives offer several equity co-benefits across key sectors. Recognizing the disproportionate effects of climate change on some communities, this CAP seeks to promote equity through the selected strategies. For example, transportation and mobility improvements can provide heightened access to underserved students; residential housing efficiency and electrification improve on-campus living space; and improving electricity resiliency with solar photovoltaic (PV) strengthens reliability for on-campus residents. With effort, initiatives can include members of the CU Boulder community that may otherwise be excluded from participation and the associated benefits. Our process has begun to seek out those voices to increase participation and feedback.

Health: Central to the CAP is a reduction in the use of combustible fuels. This will produce benefits in air quality, from reduced particulate matter, nitrogen oxides (NOx) emissions, and smog formation. Furthermore, the production and refining of fossil fuels causes direct impact to Colorado communities who have been historically and currently burdened by these operations. While the conversion from a diesel to an electric bus might have limited overall GHG emissions benefits, the impact to air quality, water quality, and noise are significant, and therefore this measure remains a high priority in the CAP.

Resilience: Many of the strategies will improve campus climate resilience, while also reducing emissions. However, many aspects of resiliency will require further investigation. Building efficiency will reduce loads on the electrical system, increase comfort in a warming environment, and provide improved operability and controllability. The conversion of fleet and building operations to electricity insulates the campus from the volatility of fossil fuel markets and can reduce certain operating costs. On the other hand, the central plant has the capability to provide gas-fired electricity to power the campus through a grid outage. It also plays an important role for the local utility in keeping high-emitting peaking plants off line. It is therefore critical that campus resilience and climate goals are considered in tandem.

There are other co-benefits as well. Several of the strategies will save the campus money, when compared to a baseline. These include many of the energy efficiency projects that have been recommended. Additionally, the campus' reputation as an environmentally conscious university will be accelerated through sustainability successes. As an example, CU Boulder currently enjoys Gold Status in the STARS Certification program, but many initiatives will help it reach Platinum Status, which is the highest level, and a significant achievement. Still more benefits, such as research opportunities and educational possibilities have not been tracked in the CAP.

TABLE 6: Co-Benefit Summary

CO-BENEFIT	SYMBOL
Promotes / Strengthens Climate Equity and Justice	
Increases Campus Resilience (infrastructure, operations, programs, people) to Climate Events	
Improves Community Health	
Augments STARS Rating	
Saves money against a baseline	

Implementation: Governance, Communication and Finance

Each strategy within this CAP is prioritized into three Tiers: Foundational (Tier 1), Supportive (Tier 2) and Complementary (Tier 3). Foundational strategies are those that directly reduce emissions and are drawn out as immediate priorities. Supportive strategies are ranked next and indicate strategies that have less of a direct GHG reduction potential but are still critical elements in reducing climate impacts. Complementary strategies are focused on educational and engagement areas that create durability and wider-reaching impact.

The implementation and progress of CAP will be overseen by the Sustainability Council, which will be appointed by the Chancellor and composed of staff, faculty, and students. The day to day implementation of the CAP will be driven by the department managers, subject matter experts, and campus leadership. The following strategies in the areas of governance, communication and finance have been developed to help ensure success over time:

1. **Governance:** Regular reporting of key metrics and progress to the Sustainability Council, which will offer formal reports to the Executive Sustainability Council and to the campus community three times per year. Specific outreach to campus governance groups will be undertaken to report progress, and/or course corrections needed.

2. **Engagement:** Successful implementation of the CAP will include an increasingly informed and engaged campus that understands how climate action is taking place and how they can participate and provide input and suggestions moving forward. The engagement goal for the CAP is to create regular communications and accessible points of connection with all parts of the campus community who wish to be engaged with this process.

3. **Finance:** Developing cost effective and economically viable financing pathways that address both one-time and ongoing costs, and that achieve the maximum benefits has been a key consideration of this CAP. Financing a CAP requires a variety of strategies and sources of funds, including internal funds, grants from government and other organizations, debt and possibly public-private partnerships (PPP). The 2022 Inflation Reduction Act (IRA) has also provided an unprecedented source of funds that is available to public entities. All of these and other financing strategies will support CAP implementation. As a possible example of a capital expenditure plan, Table 6 outlines the planned investment totals required in the next ten years (2024-2034).

TABLE 7: 10-year estimated investment costs (in $ millions) associated with achieving Core Goal 1

YEAR	TOTAL ESTIMATE	LIGHTING	ENVELOPE	RCX	HVAC	FLEET & CHARGING	SOLAR	HSU
10-year Totals	$390	$34	$15	$4	$64	$23	$0	$250

Lighting = replacing lights and fixtures with high efficiency alternatives;

RCx = Building recommissioning: testing and optimizing system performance;

HVAC = heating, ventilation, and air conditioning;

HSU = Heating System Upgrades: replacing gas boilers with electric & transitioning central campus district energy system to a low-temp hot water system.

Building Projects

HVAC UPGRADES
Involves upgrading energy recovery, ventilation upgrades, HVAC Control Upgrades, piping and equipment insulation, temperature setbacks.

COMMISSIONING
Identifying and fixing building performance problems that have developed over time, optimizing systems, and ensuring energy efficiency goals are met.

LIGHTING UPGRADES
Involves: 1) replacing lamps and fixtures with energy efficient LED lighting, and 2) daylight controls and operating sensors

ENVELOPE UPGRADES
Includes weatherization and window upgrades.

Conclusion

Achieving climate goals and the associated benefits is considered vital to the University. It will require significant upfront investment, robust annual funding, and a re-evaluation of many of the business-as-usual modes of campus management. The projects and timelines throughout this report draw from Scenario 3, summarized above. Future investment decisions about all the projects associated with climate action activity are subject to currently unknown factors including available funding, emerging technologies, the findings of new studies, and the perspective of future stakeholders.

TABLE 8: Summary of All Strategies

TIER	SCOPE	SCOPE 3 CATEGORY	STRATEGIES	CO-BENEFITS
1	1+2	NA	Re-commissioning projects	
1	1+2	NA	HVAC system retrofits	
1	1+2	NA	Envelope improvements	
1	1+2	NA	New Building Efficiency Design Standards	
1	1	NA	Main campus heating system upgrade	
1	2	NA	Lighting retrofits	
1	2	NA	On-campus solar PV	
1	3	2	Update building materials standards for new construction and major renovations	
1	3	7	Institute a Transportation Demand Management Plan encouraging mode shifting	
1	3	7	Develop an affordable community EV Charging plan	
1	1	NA	Electrify campus vehicle fleet	
2	3	1	Identify opportunities to assess & implement carbon reduction with suppliers	
2	3	2	Reduce embodied carbon by >10% and target 20% for new construction and major renovation projects; align with Buy Clean CO	
2	3	5	Institute a construction waste diversion policy	
2	3	6	Facilitate discussion on options to reduce business travel emissions	
2	3	6	Incentivize use of airlines that promote sustainable fuel use, but not purchased carbon offsets	
2	3	7	Develop a community shared EV program	
2	1+2	NA	Optimize Existing Building Space	
2	3	3	Reduce upstream gas leakage (will result from decreased gas use)	
3	3	1	Establish a food recovery program on campus for all catering and culinary events	
3	3	1	Increase percentage of locally-grown foods purchased and plant-based meals served	
3	3	5	Eliminate purchase of disposable or single-use plastics for nonessential uses	
3	3	5	Establish a campus reuse center (clothes, furniture, etc.), and online reuse platform	
3	3	5	Write a Zero Waste plan to address construction and demolition, and strategies around compostables and food recovery efforts	
3	3	5	Translate the results of a pre- and post-waste audit into an actionable waste diversion roadmap with expected annual reporting metrics	
3	3	7	Host engagement sessions with the campus community to determine best incentives for the use of electric vehicles and e-bikes. Consider distributing e-bikes to low-income students/staff through a sponsorship program.	
3	3	7	Improve the VMT estimation process to ensure accuracy and replicability of the VMT number annually for sustainability reporting and program analysis	
3	3	7	Expand staff vanpools to make them available to more low-income staff	
3	3	9	Initiate surveys to measure student travel during breaks and family visit air travel	
3	3	9	Educate students and parents on emissions from air travel	
3	3	9	Explore options, along with CU system partners, to reduce travel related emissions during holiday breaks