

Appendix C: Long-Term and Modified CAAP Actions

Long-Term Actions

Actions classified as “long-term” are important initiatives to revisit in future CAAP updates or actions that will be more cost-effective or technologically feasible later on (e.g., focusing on building energy efficiency in the near-term and renewable energy in the longer-term).

Sector	Original Action ID	Original Action Description
Energy	E-1.1.2	Develop and implement virtual/aggregate net metering policies and procedures with Water & Light to allow privately developed community solar.
Energy	E-1.1.4	Streamline and offer expedited permitting for renewable energy installations.
Energy	E-1.1.5	Make it easier for large multi-family, commercial, and industrial customers to maximize the benefit of using their space for photovoltaics (e.g., feed-in tariff, third-party lease agreements, roof space rental).
Energy	E-1.1.6	Require production meters on all new net-metered photovoltaic installations.
Energy	E-1.1.7	Determine the true value and potential of customer-owned photovoltaics to the infrastructure, economics and renewable goals of Water & Light. Analysis should include time of generation, capacity credit, distribution circuit support, customer characteristics, technical and market potential, etc.
Energy	E-1.1.9	Establish a permit lease program for photovoltaic on buildings connected via net metering open to Water & Light and third party vendors.
Energy	E-2.1.2	Ensure equitable implementation of grid resilience actions by partnering with high-risk neighborhoods and non-governmental organizations to develop resilience hubs—community facilities that offer power and other services during times of need. Establish criteria to screen and select locations for community microgrids to support grid and community resilience.
Housing, Building, and Development	H-1.1.3	Establish a date by which all rental housing will be required to meet basic energy efficiency standards at license renewal. (see case study)

Sector	Original Action ID	Original Action Description
Housing, Building, and Development	H-1.1.5	Phase in NetZero or highly energy efficient building requirements into the building code.
Housing, Building, and Development	H-1.2.2	Develop specific energy efficiency programs for hard-to-reach segments of commercial properties (e.g., commercial rental, restaurants, large scale manufacturing, offices, affordable multifamily housing).
Housing, Building, and Development	H-1.2.6	Require newly constructed buildings larger than 15,000 square feet to meet LEED Gold, Enterprise Green Communities, the 24 National Green Building Standard ICC/ASHRAE 700, or an equivalent certification.
Housing, Building, and Development	H-1.2.7	Require existing buildings larger than 15,000 square feet and exceeding minimum alteration thresholds to meet building certification of LEED Silver, Enterprise Green Communities, the 27 National Green Building Standard ICC/ASHRAE 700, or an equivalent certification.
Housing, Building, and Development	H-1.2.8	Develop deep retrofit standard requirements and incentives for owners of existing commercial buildings less than 15,000 square feet to reduce the carbon footprint of the building to zero.
Housing, Building, and Development	H-1.4.3	Require, when cost comparable, that new air conditioning units use refrigerants with low global warming potentials (e.g., carbon dioxide or ammonia instead of hydrofluorocarbons).
Housing, Building, and Development	H-1.5.2	Invest in district heating and cooling for downtown City and County buildings.
Housing, Building, and Development	H-1.6.1	Require light colored roofs and/or a minimum specified reflectance for commercial roofs when new or at replacement.
Transportation	T-1.3.2	Establish a bike share program.
Transportation	T-1.5.5	Partner with Columbia Public Schools to adjust school siting requirements to prioritize building schools in walkable and bikeable areas.
Transportation	T-2.1.4	Incentivize the purchase of electric vehicles through rebates on vehicles and/or residential chargers.

Sector	Original Action ID	Original Action Description
Transportation	T-2.2.1	Solicit a car share program, such as Zipcar or Get Around, to provide cars in a central location.
Transportation	T-2.2.2	Identify locations and partners to facilitate carpooling, telecommuting options, and parking buyback programs for municipal and other employers in the region.
Transportation	T-2.3.1	Implement street design to improve road and vehicle efficiency (e.g., roundabouts, synchronize traffic signals, road diets).
Waste	W-1.1.2	Partner with local organizations (e.g., Habitat for Humanity for demolition waste pickup and reuse.
Waste	W-2.1.2	Require multifamily homes to offer on-site recycling for residents.
Waste	W-2.2.1	Study the short and long term cost/benefit of a City composting program.
Waste	W-2.2.2	Offer five days a week (Monday through Friday) collection for food waste and certified compostable material at businesses. Change the type of compost operation or increase land allocation to handle additional feedstock, as needed.
Waste	W-2.2.3	Offer curbside compost collection to all residential properties (e.g., single-family and multifamily) for yard waste, food waste and certified compostable products. This service is optional for all residential properties.
Waste	W-2.3.1	Research management practices of construction and demolition waste diverted from the landfill.
Waste	W-2.3.2	Promote a C&D recycling industry in Columbia by preparing ordinance and construction permit changes that would be implemented if a C&D recycling company wishes to operate in the Columbia area. City staff will actively seek C&D recycling companies that might be interested in the Columbia area following the proposed policy changes.
Waste	W-2.4.1	Offer positive reinforcement and indirect financial incentives to encourage businesses and residents to divert material from the landfill.
Waste	W-2.4.2	Develop and enforce ordinances requiring commercial customers to recycle material streams like cardboard, paper, beverage containers, etc.
Waste	W-2.4.3	Offer quarterly curbside bulky-items pickup for residents and businesses.
Waste	W-3.2.1	Remodel and upgrade the City's Material Recovery Facility to increase processing capacity, add sortation technology and provide space for additional material types to be recycled, including (but not limited to) e-waste, mattresses, cartons and household hazardous wastes.
Waste	W-3.2.2	Research new technologies for enhanced landfill methane capture.

Sector	Original Action ID	Original Action Description
Health, Safety, and Wellbeing	HS-1.1.1	Develop and implement a plan to monitor climate change related illnesses. Utilize results in resource and policy planning, with particular focus on neighborhoods. Communicate results to the public on a periodic basis.
Health, Safety, and Wellbeing	HS-1.1.5	Partner with outside agencies to offer community resilience model training.
Health, Safety, and Wellbeing	HS-1.1.6	Conduct a needs assessment of accessible community centers for extreme weather or other emergency situations. Create a development improvement plan, if needed.
Health, Safety, and Wellbeing	HS-1.1.8	Develop a long-term plan for potential growth in foreign and domestic refugees.
Health, Safety, and Wellbeing	HS-1.1.9	In planning for additional fire stations and resources, incorporate projections for increased grass, brush, and backyard fires.
Health, Safety, and Wellbeing	HS-1.3.2	Update property maintenance code to manage and mitigate mold or fungus.
Health, Safety, and Wellbeing	HS-1.3.3	Establish funding for a program to trap mosquitoes and ticks to monitor for disease or disease-carrying species.
Health, Safety, and Wellbeing	HS-1.3.4	Expand outdoor treatment to mitigate the spread of vector-borne diseases when evidence of local disease is identified.
Health, Safety, and Wellbeing	HS-1.3.5	Identify sources of ozone pollution in Boone County and establish a countywide system to gather data and set thresholds to trigger actions.
Health, Safety, and Wellbeing	HS-1.4.1	Form a team to develop action plans to address climate-related mental health resilience at the individual, neighborhood and community level.
Health, Safety, and Wellbeing	HS-1.4.2	Ensure the community has robust resources to address increases in violence and crime, particularly domestic violence, during periods of stress including emergencies and heat waves.
Health, Safety, and Wellbeing	HS-2.1.1	Support organizations and schools promoting local food production and community gardens, through partnerships, funding, and educational programs on the benefits of a plant-based diet.
Health, Safety, and Wellbeing	HS-2.1.2	Review ordinances and development regulations to promote urban farming.

Sector	Original Action ID	Original Action Description
Health, Safety, and Wellbeing	HS-2.1.3	Work with Regional Economic Development, Inc. (REDI) to develop an entrepreneurship program for commercial urban farming.
Health, Safety, and Wellbeing	HS-2.1.4	Update code to provide incentives or require developers to preserve topsoil and provide space for backyard or community gardens.
Natural Resources	NR-1.1.3	Create an ordinance that establishes a Transfer of Development Rights program to protect undeveloped lands for land conservation and/or agriculture.
Natural Resources	NR-1.1.8	Update current development regulations to recommend or require the use of appropriate native trees and plants for new- and re-development.
Natural Resources	NR-1.1.9	Identify underutilized paved areas and incentivize conversion to sustainable green space.
Implementation	I-2.1.3	Develop a decision matrix to be used to integrate mitigation and adaptation priorities into City planning and standards (e.g., zoning, construction standards, CIP review). City departments will utilize forecasted model data (e.g., climate, health, population, economic, etc.) during these processes, where available.
Implementation	I-2.2.3	Assessment of progress toward CAAP goals shall be included in the City Manager's annual performance review by the City Council.
Implementation	I-3.1.5	Provide training and other capacity building opportunities to staff to facilitate creative, climate positive innovations in operations, project design and implementation.
Implementation	I-3.2.1	Create a report that identifies the differential impact of climate change on neighborhoods and communities.
Implementation	I-3.3.2	Engaging with community partners, identify unmet community needs, barriers and opportunities to improve access to the green job economy for all community members.
Implementation	I-3.3.4	Develop CAAPtains to serve as ambassadors for the CAAP activities, especially youth.

Modified Actions & Rationale

Actions classified as "modified" were completed, or most often consolidated with other efforts or actions.

Sector	Original Action ID	Original Action Description	Modification Type	Rationale for Modification from CAAP Update
Energy	E-1.1.1	Offer community solar program through Water & Light.	Completed	Action was completed; solar is addressed through the Water & Light planning integration action (originally Action E-1.2.1)
Energy	E-1.1.8	Require all new commercial buildings to be solar ready.	Completed	Completed
Energy	E-1.2.2	Consider all renewable energy sources on a cost per metric ton of carbon dioxide equivalent reduction in the City's integrated electric resource plan.	Consolidated	Integrated into Water & Light planning integration action (originally Action E-1.2.1)
Energy	E-1.2.3	Invest in local renewable energy generation.	Consolidated	Broad and general; covered within other actions (e.g., Water & Light planning action, originally Action E-1.2.1)
Energy	E-1.3.1	Remove 3% rate cap to allow for increased investment by Water & Light in renewable energy resources.	Consolidated	E.-1.3.2 and E-1.31 have been consolidated into the 5-year action item "Renewable Energy Ordinance Update"
Energy	E-1.3.2	Codify through ordinance Columbia Water & Light's responsibility to meet 100% renewable energy generation or purchase by 2035, including parameters for the use of Renewable Energy Credits (RECs) and equity and cost impacts.	Consolidated	E.-1.3.2 and E-1.31 have been consolidated into the 5-year action item "Renewable Energy Ordinance Update"
Energy	E-2.1.1	Develop energy storage (battery) programs for all customer types to reduce peak demand, support electric grid reliability and improve the effectiveness of solar and other renewable energy options.	Consolidated	Integrated into Water & Light planning integration action (originally Action E-1.2.1)
Energy	E-2.1.3	Maintain current rate of reliability due to weather related power outages. Investigate energy storage possibilities, such as batteries, to increase reliability.	Consolidated	Consolidated with utility-scale energy storage action (originally Action E-2.2.3)
Energy	E-2.2.2	Increase, enhance and implement demand side management programs.	Consolidated	Integrated into Water & Light planning integration action (originally Action E-1.2.1)

Sector	Original Action ID	Original Action Description	Modification Type	Rationale for Modification from CAAP Update
Housing, Building, and Development	H-1.1.6	Develop standard deep retrofit specifications and incentives for existing residential building owners to reduce the carbon footprint of the building to zero.	Consolidated	H-1.1.6 and H-1.1.7 have been consolidated with the Energy Ongoing Action, "Water & Light Planning Integration." Incentives for energy efficiency and electrification are reviewed regularly through the processes included in the ongoing action Community generally prefers incentives and support over mandates
Housing, Building, and Development	H-1.1.7	Promote and offer incentives for improving residential energy efficiency in new construction (e.g., insulation, energy-efficient windows, electric heat pumps). New construction incentives shall support measures for projects that exceed code requirements.	Consolidated	H-1.1.6 and H-1.1.7 have been consolidated with the Energy Ongoing Action, "Water & Light Planning Integration." Incentives for energy efficiency and electrification are reviewed regularly through the processes included in the ongoing action
Housing, Building, and Development	H-1.1.8	Formalize a Community Cost Share Fund for tax advantaged donations to go towards energy efficiency education and improvements for renters. Track with event attendance and participation in rental efficiency improvements.	Consolidated	Consolidated with Community Cost Share Fund action (originally Action H-1.1.2)
Housing, Building, and Development	H-1.2.3	Promote and offer incentives for improving energy efficiency (e.g., insulation, energy-efficient windows, electric heat pumps) in newly constructed commercial properties. New construction incentives shall support measures for projects that exceed code requirements.	Consolidated	Consolidated with Water & Light action (originally Action E-1.2.1)
Housing, Building, and Development	H-1.2.4	Identify funding strategies to ensure rebate budgets are sufficient to meet expanded offers and goals.	Consolidated	Covered within other actions (e.g., Community Cost Share Fund, originally Action H-1.1.2); partially complete

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Housing, Building, and Development	H-1.2.5	Create Utility Services rebate programs that provide incentives based on energy use reduction in addition to demand reduction (e.g., lighting controls, outdoor lighting, energy recovery ventilation, carbon dioxide controls, custom rebate).	Consolidated	Covered within other actions related to incentives and efficiency (e.g., Community Cost Share Fund, originally Action H-1.1.2, and Water & Light planning integration action, originally Action E-1.2.1)
Housing, Building, and Development	H-1.3.2	Create a policy, to be part of assigned duties and presented during new employee orientation, that City employees shall turn off lights and equipment when they are done using them.	Low impact	Relatively small impact
Housing, Building, and Development	H-1.3.3	Introduce a policy that requires all new and existing municipal buildings to meet and maintain energy and resource efficiency standards (ENERGY STAR, LEED, Home Energy Score or other).	Consolidated	Covered with City building energy performance & benchmarking action (originally Action H-1.3.1)
Housing, Building, and Development	H-1.3.4	Introduce a policy that requires all municipal buildings to be benchmarked with the current Energy Score rating, the energy use intensity (kBtu/sqft) and the energy reduction goal. These benchmarks and goals shall also be posted on the City's website.	Completed	Completed
Housing, Building, and Development	H-1.3.5	Create a target of net zero energy use at all municipal buildings by 2025.	Consolidated	Covered with City building energy performance & benchmarking action (originally Action H-1.3.1)
Housing, Building, and Development	H-1.4.4	Develop incentive programs to transition lawn care companies and homeowners from using fuel-burning lawn equipment (e.g., lawn mowers, blowers) to electric.	Low impact	Preference to let the market manage electric tools
Housing, Building, and Development	H-1.5.1	Incentivize switching space and water heating from fossil fuel-based to electric heat pumps.	Consolidated	Completed, consolidated with broader W&L action (originally Action E-1.2.1)

Sector	Original Action ID	Original Action Description	Modification Type	Rationale for Modification from CAAP Update
Housing, Building, and Development	H-1.6.2	Develop affordable and efficient (temporary/transitional) housing options.	Consolidated	Consolidated in Infill and Connected Neighborhoods action (originally Action T-1.5.2)
Transportation	T-1.1.1	Prioritize transportation funding for Vision Zero engineering improvement projects to create safe streets for people walking, biking and riding transit.	Covered elsewhere	Represented elsewhere (Vision Zero plan)
Transportation	T-1.3.1	Build and maintain a network of on-street protected bike lanes on streets with speed limits above 30 mph. Build other bike facilities (e.g., bike boulevards, etc.) on streets with lower traffic/speed.	Consolidated	Consolidated in Complete Streets policy (originally Action T-1.1.2)
Transportation	T-1.4.2	Install universal design accessibility features at crossing locations to ensure the crossing is accessible for everyone (e.g., pedestrian traffic signals, audible signals).	Consolidated	Consolidated in Complete Streets policy (originally Action T-1.1.2)
Transportation	T-1.5.1	Revise zoning codes to favor walkable, connected neighborhoods in the existing built environment, near schools and new development.	Consolidated	Consolidated with infill and connected neighborhoods action (originally Action T-1.5.2)
Transportation	T-1.5.4	Preserve and enhance affordable housing, especially near bus service, to prevent displacement of vulnerable populations.	Consolidated	Consolidated with infill and connected neighborhoods action (originally Action T-1.5.2)
Transportation	T-2.1.1	Introduce a policy to replace City fleet vehicles and buses with electric and hybrid options at the time of replacement, and require emissions standards, testing and biofuel preference for any combustion vehicles remaining in the fleet.	Completed	Completed
Waste	W-1.1.1	Create a reuse program for curbside collection and purchase a warehouse to store and sell items that are not accepted by local non-profit groups.	Covered elsewhere	Covered by many non-profits and other organizations

Sector	Original Action ID	Original Action Description	Modification Type	Rationale for Modification from CAAP Update
Waste	W-2.1.1	Restructure all solid waste rates to reduce the amount of waste sent to the landfill.	Completed	Completed
Waste	W-3.1.1	Research and add best practices for recycling hydrofluorocarbons (potent GHG used in refrigeration and air conditioning) in next CAAP update.	Completed	Completed
Health, Safety, and Wellbeing	HS-1.1.7	Deploy point-in-time alert systems (e.g., RAVE, Nixle) to notify people of extreme weather events, periods of dangerous cold, and heat waves and refer them to resources on symptoms and prevention of climate-related illness.	Covered elsewhere	Already covered by Boone County Emergency Mgmt
Health, Safety, and Wellbeing	HS-1.2.2	Increase availability to cooling mechanisms in low-income housing and rental units (e.g., air conditioning units, fans, window screens).	Completed	Data review showed that over 99% of rental units have AC or window screens
Health, Safety, and Wellbeing	HS-1.2.4	Monitor the number of utility disconnects during heat waves and assess if current policy should be updated for changing community needs.	Completed	Already addressed through the current utility disconnect ordinance
Health, Safety, and Wellbeing	HS-1.3.1	Create anti-idling policies and enforcement plans.	Low impact	Low return, hard to enforce. Keeping this internal, but not in the actual CAAP plan
Health, Safety, and Wellbeing	HS-2.2.1	Continue to provide enrollment assistance for participation in the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Program and other food assistance programs.	Covered elsewhere	Accounted for in other plans/programs. Not going to stop - does not need to be in CAAP
Natural Resources	NR-1.1.4	Support the Urban Forest Master Plan to identify programs and suitable locations to maintain and expand Columbia's urban tree canopy.	Consolidated	Replaced with new Implementation action about broadly aligning City plans with CAAP

Sector	Original Action ID	Original Action Description	Modification Type	Rationale for Modification from CAAP Update
Natural Resources	NR-1.1.6	Assess whether or not to purchase and preserve greenspace in and surrounding the city by quantifying the equitable, environmental, and economic benefits, along with the costs of maintaining and owning the property.	Consolidated	Consolidated with landscape connectivity strategy action (originally Action NR-1.1.2)
Natural Resources	NR-2.1.1	Complete change to rate structure to encourage reduced water use.	Completed	Completed
Natural Resources	NR-2.1.3	Develop a technical assistance and incentive program to encourage water conservation behavior and upgrades, such as use of drip irrigation and low-flow toilets.	Completed	Completed
Natural Resources	NR-3.1.1	Implement strategies to mitigate stormwater impacts due to development and redevelopment of properties currently exempted from stormwater management requirements.	Consolidated	Consolidated with 500-year floodplain policy evaluation action (originally Action H-1.6.3)
Natural Resources	NR-3.2.2	Perform detailed studies to identify areas that are at high risk for flooding and may be a prospect for property acquisition or mitigation.	Consolidated	Consolidated into flood risk assessment action (originally Action NR-3.2.1)
Natural Resources	NR-3.2.4	Perform a flood risk assessment using historical data and future precipitation forecasts to identify areas and critical infrastructure vulnerable to flooding.	Consolidated	Consolidated into flood risk assessment action (originally Action NR-3.2.1)
Implementation	I-1.2.1	Create Community Climate Commission to advise staff on the implementation of the CAAP. The Commission will represent the diversity of the community with relevant expertise in the social, scientific, economic and environmental components of CAAP strategies.	Completed	Completed
Implementation	I-2.2.1	Integrate annual CAAP report goals during the budget review process at the direction of the City Manager.	Consolidated	Consolidated with Project and budget integration action (originally Action I-2.2.2)

