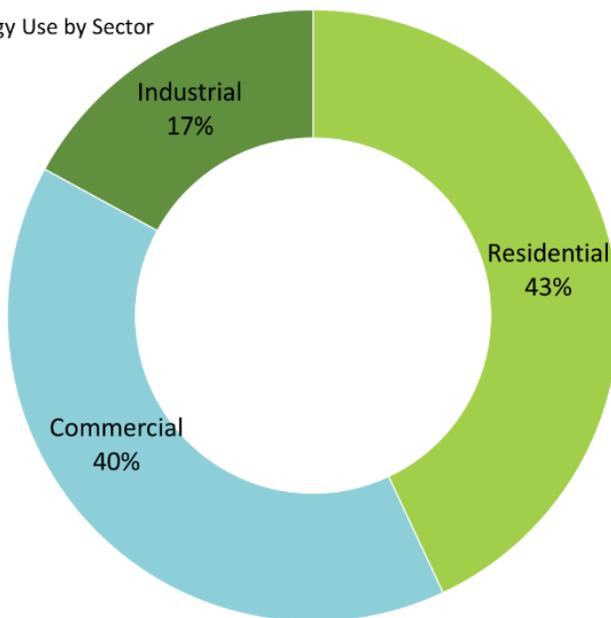


Energy

Energy refers to electricity generated and delivered to the Columbia community. Energy consumption accounts for 70% of Columbia’s total greenhouse gas emissions and adopting clean energy is by far the most impactful modeled CAAP strategy. Energy-related emissions come from electricity used in homes, businesses, and in industry. Columbia’s electricity is the primary factor in energy emissions, which means adopting clean energy has a big impact on community GHG emissions.

Climate change will impact energy use in Columbia. As air temperatures rise in Columbia, the use of air conditioning may increase, leading to increased energy use, household cooling costs, and greenhouse gas emissions. Households with lower annual incomes may be less likely to have air conditioning or may be more affected by increased energy costs.

Energy Use by Sector
2015



Strategies and Actions

This sector includes strategies for increasing renewable energy generation, managing energy demand, and increasing grid resilience. To increase renewable energy installation, the City can install solar panels on municipal buildings, streamline permitting for renewable energy, and support community solar programs. Adopting renewable energy can reduce energy costs and reduce air pollution associated with coal-produced electricity.

Columbia Water and Light can support CAAP goals by purchasing and producing renewable energy, and moving towards 100% renewable electricity generation.

Increasing grid resilience helps support the

City’s energy supply in times of natural disaster and peak energy demand. For example, distributed energy storage can help smooth out the peaks and valleys of renewable energy sources like wind and solar and improve community capacity to maintain electricity with regional outages. Additionally, behavior change can help the utility manage peak demand during the hottest parts of the summer. Reducing peak demand helps the utility and ratepayers save money and prevent outages.

Throughout this, and every sector, education and outreach will play a critically important role. City staff, the Task Force, and community members noted frequently during this process that the programs, policies, and changes needed to meet the CAAP goals can only be valuable if people know they exist, why they are helpful, and how to access them. The Plan, in implementation strategy I-3.3: “Develop community leadership capacity for, and involvement in, climate action,” prioritizes this crucial strategy to ensure education and outreach will be a part of its successful implementation.

Goal E-1. Increase local renewable energy generation and procure renewable electricity.

Strategy E-1.1: Increase on-site renewable energy installations in new and existing buildings.		
E-1.1.1	Offer community solar program through W&L.	Priority
E-1.1.2	Develop and implement virtual/aggregate net metering policies and procedures with W&L to allow privately developed community solar.	Priority
E-1.1.3	Install solar panels on all City buildings and sites, where feasible.	Priority
E-1.1.4	Streamline and offer expedited permitting for renewable energy installations.	Priority
E-1.1.5	Make it easier for large 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).	Priority
E-1.1.6	Require production meters on all new net-metered photovoltaic installations.	Priority
E-1.1.7	Determine the true value and potential of customer-owned photovoltaics to the infrastructure, economics, and renewable goals of W&L. Analysis should include time of generation, capacity credit, distribution circuit support, customer characteristics, technical and market potential, etc.	Priority
E-1.1.8	Require all new commercial buildings to be solar ready.	Other
E-1.1.9	Permit lease program for photovoltaic on buildings connected via net metering open to CW&L and third party vendors.	Other
Strategy E-1.2: Maximize Columbia Water and Light's renewable energy purchasing and production.		
E-1.2.1	Include CAAP priorities in Columbia Water & Light's long range electric planning goals.	Priority
E-1.2.2	Consider all renewable energy sources on a cost per metric ton of CO2 equivalent basis reduction in the City's integrated electric resource plan.	Priority
E-1.2.3	Invest in local solar and wind fields.	Other
Strategy E-1.3: Revisit and adjust Columbia's Renewable Energy Ordinance to meet climate goals.		
E-1.3.1	Remove 3% rate cap to allow for increased investment by Water & Light in renewable energy resources.	Priority
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.	Priority

Goal E-2. Maintain reliability of local energy supply and local distribution.

Strategy E-2.1: Create a resilient energy grid.		
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.	Priority
E-2.1.2	Ensure equitable implementation of grid resilience actions by partnering with vulnerable neighborhoods and non-governmental organizations to develop resilience hubs--community facilities that offer power and other community services during times of need. Establish criteria to screen and select locations for community microgrids to support grid and community resilience.	Priority
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.	Other
Strategy E-2.2: Manage energy demand to reduce peak energy use.		
E-2.2.1	Install meters that allow for rate structures that incentivize lower electricity use at peak hours.	Priority
E-2.2.2	Increase, enhance and implement demand side management programs.	Other
E-2.2.3	Implement utility scale energy storage.	Other