



The Quest for 100% Renewables – City Examples and Promising Models

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Introduction

- This is a 10,000 foot-level look at what other cities are doing before the Work Groups descend into the trenches to complete their local work
- First 7 cities were identified by the Sierra Club as 100% renewable
- Additionally, we examined a small group of additional cities that may have some useful policy models
- Policies have not been analyzed in-depth; staff will continue to drill down.
- We are in contact with Rocky Mountain Institute (RMI) and continue to look for promising models
- We need to understand local differences and similarities to Bellingham to understand applicability

Aspen, CO

- Population 6,871; median income \$53,750
- Targets: Reduce Community Emissions 30% below 2004 levels by 2020 and 80% below 2004 by 2050.
- Has achieved 100% renewables in its municipal utility.
- Sources: 46% hydroelectric, 53% wind power, 1% landfill gas. Solar thermal for hot water.
- Adding in electricity from a regional coop utility and purchased power, city is *51% renewable*.
- Gas still used for heating for more than 50% of accounts
- Transportation is also a priority target for the local CAP
- Web: <https://www.cityofaspen.com/518/Climate-Action-Canary-Initiative> ; <https://www.cityofaspen.com/1202/>



Burlington, VT

- Population: 42,260; median income 42,239
- Has achieved 100% renewables in electricity sector. City has a muni utility.
- Sources: Wood scrap furnace, hydro (some purchased), wind, solar, landfill methane. Waste heat from wood used to heat buildings.
- Question: Is a wood scrap furnace carbon neutral? “Each day 1,800 tons of pine and timber slash, sustainably harvested within a 60-mile radius and ground into wood chips, is fed into the roaring furnaces of the McNeil Generating Station....”
- Buildings: Energy efficiency agency; new homes required to be energy-certified; PACE program available; Smart meters.
- Transportation: protected bike lanes, charging stations, etc.
- Web: <https://www.politico.com/magazine/story/2016/11/burlington-what-works-green-energy-214463> ; <https://www.burlingtonvt.gov/Sustainability/CAP>



Columbia, MD

- Population: 103,467; median income \$102,899
- Has achieved 100% renewables in electricity sector via purchases and RECs.
- Sources: Solar PPAs (25%), wind RECs (75%)
- Web: <https://www.prnewswire.com/news-releases/columbia-md-now-100-percent-renewable-with-latest-solar-farm-from-sunedison-300141481.html> ; <http://www.pvsolarreport.com/columbia-maryland-renewable/>



Georgetown, TX

- Population: 67,140; median income \$64,256
- Has achieved 100% renewables in electricity sector. City has a muni utility.
- Sources: Solar and Wind PPAs
- City seeing some financial issues b/c purchased too much power
- Web: <https://gus.georgetown.org/renewable-energy/>

Greensburg, KS

- Population: 771; median income \$37,500
- Rebuilding of utilities after tornado/ice storm catalyst for change in approach
- Has achieved 100% renewables in electricity sector. City has a muni utility.
- Source: Wind
- City has 100% LED streetlights and LEED platinum buildings
- Web: <https://www.greensburgks.org/sustainability/how-we-put-the-green-in-greensburg>

Kodiak Island, Ak

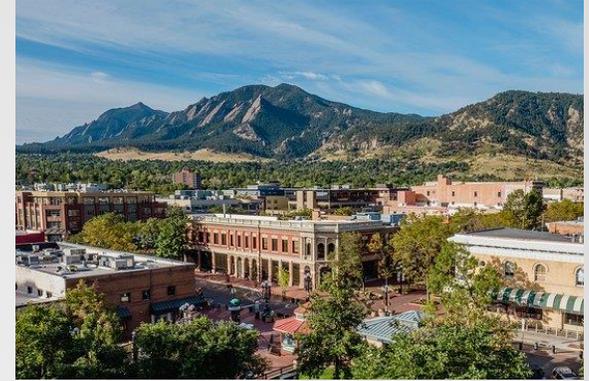
- Population: 13,592; median income \$74,167
- 99.7% renewable energy. Power rates are low and declining.
- Island has muni utility. State grants used for some investments.
- Sources: Wind and hydro; batteries are being added for grid storage
- Web: https://www.rmi.org/blog_2015_05_19_an_alaskan_island_goes_one_hundred_percent_renewable/

Rock Port, Mo

- Population: 1,318; median income \$42,092
- Source: Local wind turbines
- Web: <https://www.npr.org/templates/story/story.php?storyId=93208355?storyId=93208355>

Boulder, CO

- Population: 108,090; median income \$70,158
- Target: 100 percent renewable electricity by 2030
- Boulder has a focus on buildings. Policies include "Smart Regs" for rental properties; A Net Zero Energy Code; and a Building performance ordinance.
- Focus on buildings including conversion from gas heating to electricity.
- Transportation efforts include expanding charging infrastructure; electrification of City fleet; switch to electrical or clean fuel buses; protected bike lanes, unbundled parking, etc.
- Web: <https://bouldercolorado.gov/climate> ;
<https://bouldercolorado.gov/sustainability/four-big-moves>



Salt Lake City, UT



- Salt Lake City, Utah
- Population: 200,577; median income \$54,009
- Target: 80% reduction in Community Greenhouse Gas Emissions by 2040, Compared to 2009 Baseline; at least 50% reduction in community footprint by 2030
- SLC Corp installed 488 KW solar on city buildings and built a 1 MW solar farm on a former landfill. In 2018, solar supplied 14% of municipal needs. An “Elevate Buildings” program works with commercial owners to track energy use and institute savings measures.
- Transportation: 291 miles of bike lanes installed; EV charging stations, etc.
- Web: <https://www.slc.gov/sustainability/climate-positive/what-were-doing/>

Summary

- Several cities have achieved 100% renewable energy on the electricity supply side. Some have not achieved full building decarbonization (e.g. gas is still used for heating).
- No city has achieved 100% renewable energy across all uses.
- Most cities that have achieved 100% renewable electricity supply have a muni utility.
- Few have made major achievements with heating and transportation thus far; building measures are more advanced.
- Bigger cities are setting lofty goals (Atlanta, Salt Lake City, Vancouver).