

Renewable Energy in Cities - Overview

Cities that have renewable energy standards or goals for municipal operations

Large Cities

Boise	250,000	New buildings built in 2030 will be net zero
Chula Vista	268,000	We have a goal of reducing total municipal energy consumption by 20% by 2020 through renewable energy or energy efficiency. To date we have installed 1.7 MW of solar and are piloting a small scale wind generator. We also have a goal of purchasing 100% renewable energy through our direct access accounts.
Orlando	270,000	100% renewable energy by 2030 for municipal operations.
Toledo	280,000	Expand and build on the BetterBuildings program which provides financing for energy efficiency technology. Decrease the amount of energy businesses and governments use while increasing the amount of energy they get from renewable sources such as solar and geothermal. Develop tools and programs to encourage more people to ride public transportation.
Mesa	464,000	The City's goal is to incorporate renewable energy generation systems at City Facilities to offset the energy purchased from the local utility, if the result is financially neutral or better.
Long Beach	470,130	The Sustainable City Action Plan outlines goals to facilitate the development of at least 2 MW of solar energy on city facilities by 2020.
Kansas City	478,000	KC's climate protection plan (adopted in July 2008) has a goal of purchasing 5% of the City's total electricity demand for municipal operations from renewable sources.
Baltimore	621,849	Municipal Strategic Energy Management Plan for city government states the goal of increasing renewable to government facilities 20% by 2022. Baltimore purchase renewables through a 22-member local government buying consortium and directly buys 10MW from Constellation Solar. The City installed and owns 1MW of solar that operates at our waste water treatment plant. We are evaluating the solar potential of two closed city-owned landfills. We routinely evaluate the technical and financial feasibility of proposals from companies desiring to sell solar power from their own solar operations. Finally, Baltimore is evaluating ways to increase the use of biogas at waste water treatment plants.
Portland	639,863	The City's 2015 Climate Action Plan dictates that the City purchases or generate 100 percent of all electricity required for City operations from renewable sources, with at least 15 percent of all electricity for City operations from on-site or district renewable energy sources such as solar, biogas, in-pipe micro-hydro and biomass. The City currently achieves the goal by purchasing Renewable Energy Certificates (RECs) to offset 85% of utility purchased electricity. The electric utilities that serve Portland currently supply 15% renewable electricity in their standard resource mix. 7% of the City's municipal operations electricity use is generated on-site with solar, micro-hydro, and biogas cogeneration systems.
Las Vegas	640,174	The City has a goal to maintain net-zero energy; it currently receives this power through a Renewable Energy Agreement with the state's investor-owned utility NV Energy: i. Most of the energy for city use is

		produced at Boulder Solar near Boulder City, Nevada. ii. Forty city buildings and facilities, parks, fire stations and community centers have approximately 3 megawatts of net-metered solar covered parking. iii. A three megawatt solar plant at the city's Water Pollution Control Facility provides power for wastewater treatment. ○ Additional power that is provided by NV Energy that already satisfies Nevada's renewable portfolio standard. ○ The City also applied for and will receive 5 megawatts of hydropower allocated to the City from Hoover Dam beginning in October 2017.
Boston	670,000	Former Mayor Menino's 2007 Executive Order on Climate Action required at least 15% of all municipal electric use come from renewable sources by 2012. Since then, the City has procured RECs for upwards of 25-33% of our total electric load (depending on pricing/budget each year). The City also has ~300kW of solar PV capacity installed on city buildings with plans to expand
Denver	690,000	Double renewable production from city facilities from 2012 level, by 2020. Using direct installations and power purchase agreements.
Seattle	705,000	We are already 100% clean via Seattle City Light's carbon neutral electricity.
San Francisco	852,000	a. For over 100 years the City's municipal owned utility has delivered GHG free electricity to municipal operations, including San Francisco's public transportation infrastructure, from its Hetch Hetchy hydropower system. San Francisco has a goal of delivering to all residents and businesses 50% RE by 2020 and 100% RE citywide, including municipal operations, by 2030. Between the City's two utilities (e.g., IOU & MOU), the grid is 44% RE today. San Francisco intends to reach its goals through expansion of its new community choice aggregation program, CleanPowerSF which currently has a Green product (currently 40% RE, in state wind, no unbundled RECs) and a SuperGreen product (currently 100% RE, in state wind, no unbundled RECs). San Francisco will continue to drive policies like its Better Roofs Ordinance which requires the installation of rooftop solar and / or living roofs on all new construction up to 10 stories. The City also plans to reach this goal through coordination with PG&E who is on track to meet their state RPS requirements
Columbus	860,090	
Austin	949,587	The Austin City Council passed Resolution No. 20070215-023 in 2007 to formally adopt a goal to make city operations carbon-neutral by 2020. Link to Resolution No. 20070215-023 . City buildings currently use 100% renewable electricity from Austin Energy through their Greenchoice program. The largest remaining sources of emissions are from fleet vehicles and natural gas consumption. We are working on decarbonizing our fleet with low and no GHG emission vehicles and we buy offsets for any GHG emissions above our yearly targets. Here is a link to our performance.
Honolulu	998,714	State goal/RPS standard is 100% renewable by 2045. City and County of Honolulu has endorsed that goal.
Dallas	1,281,000	100%, buying RECs
City of Phoenix	1,600,000	100% alternative fuel by 2025 100% carbon neutral by 2050 Based on plans in operations--leading by example. In discussions with utility on the pathway to get there.
Chicago	2,705,000	In April of 2017 Mayor Emanuel committed to achieving 100% renewable electricity use for City of Chicago, Chicago Public Schools, Chicago Housing Authority, Chicago Park District, and Chicago City

		Colleges by the year 2025. This will be achieved through a mix of onsite renewable energy generation, renewable energy certificates, and power purchase agreements. City and Sisters will evaluate the electricity portfolio on a routine basis and evaluate the best opportunities.
Los Angeles	4,030,904	L.A. has a municipal utility which provides service to all city operations, municipal and not. The current state mandated goal is 50% renewable by 2030, however the utility has committed to 65% by 2036.
Houston	2,250,000	Goal of 100% renewable for municipal operations. Currently at ~89% (Green-E certified RECs (wind) + 50 MW solar PPA). Hope to reach 100% in 2018.
New York	8,500,000	The City has a goal to install 100 MW of solar on public buildings by 2025.

Medium Cities

Salt Lake City	192,672	50% renewable electricity by 2020 100% renewable electricity by 2032
Fremont	230,000	Currently, the City has installed 1.5MW of solar on its facilities, offsetting approximately 15% of municipal electricity usage. The City will continue to analyze the potential for additional solar PV systems. Finally, the City has recently joined a Community Choice Energy authority, which has the goal to start with a 50% renewable electric mix, and will be working to invest in the development of localized distributed renewable energy resources both onsite and offsite within our County.
Torrance	147,175	Focus on continued energy management through capital project budget, with a goal of 2% reduction over the next 5 years.
Newport News	181,825	The City's "Roadmap to Sustainability" identified three goals for Energy Efficiency and Conservation; Promote green businesses and energy independence and search for renewable energy opportunities; Promote energy efficiency and conservation practices and technologies in City facilities and vehicles; and Promote energy efficiency and conservation awareness in the community.
Elizabeth	124,969	By implementing an Energy Efficiency and Conservation Strategy, the City of Elizabeth seeks to reduce total energy use, fossil fuels, emissions of air pollutants and greenhouse gases, lower energy costs and improve the reliability and security of its energy system. Clean energy can also spur local economic development, improve public health and quality of life, as well as help communities achieve sustainability and "green-building" goals.
Tempe	180,000	20% of Municipal Energy by 2025
Des Moines	210,000	25% by 2020; 50% by 2030; Carbon Neutral by 2040
Waterbury	110,000	Voluntary goal to purchase 20 % from renewable energy sources by 2018. See attached letter of commitment. Fuel cell and solar are current options being implemented,
Gresham	108,000	100% renewable energy use by 2030. The City has made significant progress toward this goal by making energy efficiency upgrades, achieving net-zero energy use at its wastewater treatment plant and converting all street and park lighting to LED. The City will continue to invest in energy efficiency and generation projects as financially appropriate, and may choose to purchase clean wind power from

		Portland General Electric to make up the difference.
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Small Cities

College Park	30,000	Generate 20 percent of electricity for City facilities using renewable sources by 2018 per Council Resolution 13-R-27 (See Appendix 3). The City has installed solar panels and anticipates installing additional panels.
West Hollywood	35,000	City has a goal of 100% renewable energy for municipal operations by 2035. Plan to achieve this goal by participating in Los Angeles County Community Choice Aggregation (LACCE) starting this year.
San Bruno	44,000	Pending as part of the Climate Action Plan (in draft)
Sheboygan	49,203	25% reduction in fossil fuels by 2025
West Sacramento	53,163	Municipal reduction target of 282 MTCO ₂ e by 2020 through installation of solar PV.
Corvallis	56,000	Future reduction targets for ghg emissions from operational energy use.
Burnsville	62,000	We plan to have 47% of our electricity from Community Solar Gardens
Eden Prairie	63,151	Recently achieved 20% increase in facilities energy efficiency and a 40% increase in fuel efficiency after 10 years.
North Port	64,472	Resolution No. 2013-R33
Schenectady	64,913	In June of 2017, Mayor Gary McCarthy signed the Mayors for 100% Clean Energy Endorsement (this includes the City as a whole). The City is also committed to meet the REV 2030 goals for the State of New York: 40% reduction in greenhouse gas emissions from 1990 levels, 50% of electricity generated must come from renewable sources, and 23% reduction in energy consumption of buildings from 2012 levels.
Encinitas	65,000	Seeking to become Net Zero Electricity for City Buildings through installations of multi-site solar arrays.
City of Walnut Creek	70,018	The City has joined MCE, a community choice energy program, and all of its facilities are using the "Light Green" default option, which is currently 50% renewable.
Santa Fe	83,000	Carbon neutral by 2040. Currently, city facilities receives 25% of its electricity from solar power, and is undergoing an energy performance contract to improve energy efficiency in its facilities.
Newton	84,000	25% reduction in GHG emissions by 2020
Clifton	85,000	Mostly in building uses
Santa Barbara	89,000	100% renewable energy for City facilities and community at large by 2030. City Facilities: energy conservation and efficiency retrofits; renewable energy generation projects; purchase renewable energy credits for remainder.
Santa Monica	90,000	100% municipal green power with RECs now and considering CCA and additional solar. The solar goal is 1 MW by 2020 .
Carmel	92,000	To become carbon neutral by 2040.

New Bedford	94,845	Original goal was 10mw in 5 years. City currently has 16.2mw in solar power and 2mw wind under contract with the city.
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Cities that currently utilize or purchase renewable electricity to power city buildings or other city operations

Large Cities

Portland	639,863	More than 40% (please specify %)	100
Las Vegas	640,174	More than 40% (please specify %)	100
Seattle	705,000	More than 40% (please specify %)	94
San Francisco	852,000	More than 40% (please specify %)	
Austin	949,587	More than 40% (please specify %)	100
Dallas	1,281,000	More than 40% (please specify %)	100
Houston	2,250,000	More than 40% (please specify %)	89
Boise	250,000	Less than 10%	
Orlando	270,000	Less than 10%	
Mesa	464,000	Less than 10%	
Kansas City	478,000	Less than 10%	
Denver	690,000	Less than 10%	
Chicago	2,705,000	Less than 10%	
New York	8,500,000	Less than 10%	
Long Beach	470,130	20- 30%	
Boston	670,000	20- 30%	
Honolulu	998,714	20- 30%	
Los Angeles	4,030,904	20- 30%	
Chula Vista	268,000	10 - 20%	
Toledo	280,000	10 - 20%	
Baltimore	621,849	10 - 20%	
Columbus	860,090	10 - 20%	
City of Phoenix	1,600,000	10 - 20%	

Medium Cities

Newport News	181,825	Less than 10%
Elizabeth	124,969	Less than 10%
Des Moines	210,000	Less than 10%
Waterbury	110,000	Less than 10%
Knoxville	186,000	Less than 10%

Las Cruces	101,759	Less than 10%
Richmond	204,214	Less than 10%
West Palm Beach	106,000	Less than 10%
South Bend	101,735	Less than 10%
Macon	159,000	Less than 10%
Rochester	210,000	Less than 10%
Gresham	108,000	30-40%
Salt Lake City	192,672	10 - 20%
Tempe	180,000	10 - 20%
Reno	240,000	10 - 20%
Clarksville	150,287	10 - 20%
Pembroke Pines	162,000	

Small Cities

San Bruno	44,000	More than 40% (please specify %)	50
City of Walnut Creek	70,018	More than 40% (please specify %)	50
Santa Monica	90,000	More than 40% (please specify %)	100
New Bedford	94,845	More than 40% (please specify %)	67
College Park	30,000	Less than 10%	
West Sacramento	53,163	Less than 10%	
Eden Prairie	63,151	Less than 10%	
North Port	64,472	Less than 10%	
Encinitas	65,000	Less than 10%	
Hallandale Beach	39,500	Less than 10%	
City of San Marcos	58,292	Less than 10%	
Redmond	60,560	Less than 10%	
Santa Barbara	89,000	30-40%	
Schenectady	64,913	20- 30%	
Santa Fe	83,000	20- 30%	
Normal	57,200	20- 30%	
Corvallis	56,000	10 - 20%	
Newton	84,000	10 - 20%	
Dubuque	58,000	10 - 20%	

Cities that have Power Purchase Agreements (PPAs)

Large Cities

Portland	639,863
Las Vegas	640,174
San Francisco	852,000
Houston	2,250,000
Orlando	270,000
Mesa	464,000
Denver	690,000
New York	8,500,000
Los Angeles	4,030,904
Toledo	280,000
Baltimore	621,849
Columbus	860,090
City of Phoenix	1,600,000

Medium Cities

Waterbury	110,000
Knoxville	186,000
Macon	159,000
Rochester	210,000
Gresham	108,000
Tempe	180,000
Reno	240,000

Small Cities

City of Walnut Creek	70,018
Santa Fe	83,000
Newton	84,000
Santa Barbara	89,000
New Bedford	94,845
Normal	57,200
Dubuque	58,000

City of San Marcos	58,292
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Cities with Renewable Energy Credit (REC) Purchases

Large Cities

Portland	639,863
Las Vegas	640,174
Houston	2,250,000
Baltimore	621,849
Columbus	860,090
Dallas	1,281,000
Chicago	2,705,000
Boston	670,000

Medium Cities

Waterbury	110,000
Newport News	181,825
Richmond	204,214
Salt Lake City	192,672
Clarksville	150,287

Small Cities

Santa Monica	90,000
Hallandale Beach	39,500

Cities that have Green Tariffs

Large Cities

Las Vegas	640,174
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Medium Cities

Salt Lake City	192,672
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Small Cities

None

Cities that have Government-generated electricity

Large Cities

Las Vegas	640,174
Portland	639,863
Baltimore	621,849
Chicago	2,705,000
Boston	670,000
San Francisco	852,000
Mesa	464,000
Denver	690,000
New York	8,500,000
City of Phoenix	1,600,000
Seattle	705,000
Boise	250,000
Chula Vista	268,000

Medium Cities

Salt Lake City	192,672
Newport News	181,825
Knoxville	186,000
Rochester	210,000
Gresham	108,000
Tempe	180,000
Reno	240,000
Elizabeth	124,969
Las Cruces	101,759
West Palm Beach	106,000
South Bend	101,735

Small Cities

Corvallis	56,000
Encinitas	65,000

Cities with Community solar

Large Cities

Denver	690,000
Orlando	270,000
Los Angeles	4,030,904

Medium Cities

None

Small Cities

Eden Prairie	63,151
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Cities with Community Choice Aggregation (CCA)

Large Cities

None

Medium Cities

None

Small Cities

Normal	57,200
San Bruno	44,000

Other

Large Cities

City of Phoenix	1,600,000	Solar leases
Toledo	280,000	Landfill cogeneration
Austin	949,587	Austin Energy's Greenchoice program which is Green-e certified.
Kansas City	478,000	a 20-year solar lease agreement with a local solar energy company & a 20-year solar services agreement with our local investor-owned electrical utility
Long Beach	470,130	SCE provides power which is 25% renewable
Honolulu	998,714	Only one utility. Their current renewable portion is 21%.

Medium Cities

Gresham	108,000	Clean wind purchase of green power from PGE
Macon	159,000	SEPA
Des Moines	210,000	Mid-American Energy user

Small Cities

West Sacramento	53,163	solar installations at city buildings
North Port	64,472	
Redmond	60,560	PSE Green Power Purchase and rooftop solar