



DRIVING PROGRESS TOWARD 100% CLEAN ENERGY AT THE U.S. CONFERENCE OF MAYORS

According to a new Sierra Club analysis, local 100% clean energy commitments have doubled since the adoption of the [“100% Renewable Energy in American Cities”](#) resolution by the U.S. Conference of Mayors on June 26, 2017, resulting in an increase in potential new renewable energy capacity and reductions in carbon emissions in the United States.

Introduced by the co-chairs of the Sierra Club’s [Mayors for 100% Clean Energy](#) initiative, the landmark resolution affirmed support from the nation’s mayors for the goal of moving to 100% clean and renewable energy in cities nationwide.

The Sierra Club has prepared this updated analysis based on data from the National Renewable Energy Laboratory (NREL) and the Energy Information Administration (EIA). While the focus of this analysis is on the U.S. electric sector, which accounts for roughly one-third of U.S. energy-related emissions of carbon dioxide, cities of all sizes can also take many other actions to eliminate carbon pollution from buildings and transportation.

Transitioning to 100% renewable energy is a strategy that cities can use to achieve progress toward meeting the goals outlined in the Paris Agreement. To date, 70 U.S. cities have committed to transition to 100% renewable electricity, many as part of a comprehensive climate action plan paired with citywide greenhouse gas reduction goals.

Salt Lake City has set a goal to transition its electricity supply to 100% renewable energy by 2032 and to reduce greenhouse gas emissions by 80% by 2050, compared to a 2005 baseline.¹ San Diego’s 2015 Climate Action Plan sets a target of 100% renewable electricity by 2035, which will help the city reduce emissions 50% by 2035.² In October 2017, St. Louis, Missouri, home to two of the largest coal companies in the United States, Peabody and Arch Coal, committed to transition to 100% clean and renewable energy by 2035. Last month, Norman, Oklahoma, home of EPA Administrator Scott Pruitt, adopted a commitment to transition to 100% renewable electricity by 2035.

To better understand the beneficial impacts of the U.S. Conference of Mayors [“100% Renewable Energy in](#)

[American Cities”](#) resolution the Sierra Club has quantified the carbon pollution reductions and renewable energy capacity additions associated with groups of cities transitioning to 100% renewable electricity:

1. Seventy U.S. cities and nine counties have passed local policy establishing a goal of powering all electricity use with 100% renewable energy. These communities represent an estimated 10.3 million Americans.
2. Mayors of 201 U.S. cities have pledged to transition to 100% renewable energy by joining [Mayors for 100% Clean Energy](#),³ an initiative launched in April 2017 that engages and recruits mayors to endorse a goal of 100% renewable energy. [Mayors for 100% Clean Energy](#) is co-chaired by Mayor Jackie Biskupski of Salt Lake City, Mayor Kevin Faulconer of San Diego, and Mayor Stephen K. Benjamin of Columbia, South Carolina.

KEY FINDINGS

Group 1: 70 cities committed to 100% renewable electricity

Since the passage of last year’s [“100% Renewable Energy in American Cities”](#) resolution at the U.S. Conference of Mayors, the number of communities that have committed to transition to 100% clean and renewable energy has doubled. At the time of last year’s U.S. Conference of Mayors, 36 U.S. cities representing 5.8 million people had adopted local policy establishing a goal of powering all electricity use with 100% renewable energy. As of June 6, 2018, 70 American cities and nine counties representing 10.3 million people have committed to transition to 100% percent clean and renewable energy.

- When these communities achieve their goals, it will reduce electric sector carbon dioxide emissions by 35 million metric tons per year, with 59% of these carbon emission reductions occurring by 2025.

	Number of Cities	Population (millions)	Total Electricity Use (million MWh)	% of U.S. electricity consumption	New Renewable Energy Capacity (GW)	Potential Carbon Reductions by 2030 (million metric tons)
Cities Committed to 100% Renewable Electricity	70 Cities & 9 Counties	10.3	94	2.5%	29	35
Mayors in Support of 100% Renewable Electricity	201	24.4	243	6.5%	75	107

- This represents an increase of approximately 81% compared with last year’s potential electric sector carbon dioxide emissions of 19.1 million metric tons per year, when only 36 cities had established 100% clean energy commitments.
- When these cities and counties achieve their goals, it will add 29 new gigawatts of renewable energy capacity. This represents an increase of roughly 87% compared with last year’s potential renewable energy capacity additions, when only 36 cities had established 100% clean energy commitments.

Group 2: 201 Mayors for 100% Clean Energy

The number of mayors that have pledged to transition to 100% clean and renewable energy has more than doubled in the year since the 2017 U.S. Conference of Mayors annual meeting. At the time of last year’s U.S. Conference of Mayors, 100 U.S. mayors representing 12.5 million people had endorsed the goal of powering all electricity use with 100% renewable energy. These communities accounted for approximately 3.4% of all U.S. electricity consumption. Today, 201 American mayors, representing 24 million people, have committed to transition to 100% clean and renewable. Together, these communities now account for 6.5% of all U.S. electricity consumption.

- If all 201 cities represented by *Mayors for 100% Clean Energy* were to transition to 100% renewable electricity, the Sierra Club’s analysis finds that electric sector carbon dioxide emissions would be reduced by 107 million metric tons per year. This represent more than a tripling of potential electric sector carbon emission reductions, up from 34.5 million metric tons last year, when only 100 mayors had adopted the *Mayors for 100% Clean Energy* pledge.

- If all 201 cities represented by *Mayors for 100% Clean Energy* were to transition to 100% renewable electricity, the Sierra Club’s analysis finds that it would add 75 new gigawatts of renewable energy capacity, more than doubling potential capacity additions from 30 gigawatts last year, when only 100 mayors had adopted the *Mayors for 100% Clean Energy* pledge. 75 gigawatts of new renewable energy is equivalent to the energy necessary to power the entire state of Florida.

DATA AND METHODOLOGY

Electricity consumption estimates (2013) for each city were taken from the [NREL’s State and Local Energy Data tool](#). Existing wind and solar electricity generation as well as legislated renewable portfolio standards were taken into account when estimating potential additional renewable energy generated by cities committing to move to 100% renewable energy.

The emissions reduction potential of this additional renewable energy generation was estimated using state-specific emissions factors for non-zero marginal cost electricity, derived from [EIA electric power sector carbon dioxide emissions](#) (2014 reported and 2016 estimated) and [net generation](#) data sets.

New renewable energy capacity was calculated using state-specific wind energy capacity factors. This calculation was performed for wind energy, purely for illustrative purposes. The city commitments would lead to a mix of new wind and solar capacity.

Population numbers are taken from 2016 U.S. census estimates.

1. <http://www.slcclean.com/climate-slc> 2. <https://www.sandiego.gov/sustainability/climate-action-plan> 3. <https://www.mayors4cleanenergy.org>

