



## American Communities Embrace 100 Percent Renewable Energy

Across the country, private and public-sector leaders are realizing that renewable energy is cleaner and as cost-effective, if not more so, than conventional fuels. In response, communities, towns, cities, companies, and entire states are transitioning to meet 100 percent of their electricity needs from renewable energy. Eighty-three cities, nine counties, and two states have either committed to or transitioned to 100 percent renewable energy.<sup>1</sup>

The below document highlights a variety of examples of places and entities that are making the switch. For the people and businesses in these places, they have seen or are projecting lower costs, more reliable power, and less pollution.<sup>2</sup> For people outside these places, they offer a model that can be replicated and a path forward. As renewable energy costs continue to decline and technologies continue to develop, this scenario will become achievable on wider scales.

### Georgetown, Texas



**POPULATION:** 70,685<sup>3</sup>

**100% RENEWABLE STATUS:** Achieved 2018

**UTILITY:** Georgetown Utility Systems  
(municipal)

**RENEWABLE MIX:** 50 percent solar, 50 percent wind<sup>4</sup>

- Costs of natural gas and renewables were similar, but natural gas providers would only guarantee prices for seven years due to price fluctuations, while renewable providers guaranteed prices for 25 years based on cost predictability.<sup>5</sup>
- City leaders were initially hesitant to publicize the move to 100 percent renewable. However, after the announcement, millions of outside investment dollars flowed into the city for economic development and companies in the city now factor renewable energy into their marketing materials.<sup>6</sup>
- The city's ownership of the utility was crucial in negotiating long-term contracts with suppliers.

## Kodiak Island, Alaska



**POPULATION:** 13,448<sup>7</sup>

**100% RENEWABLE STATUS:** Achieved 2012

**UTILITY:** Kodiak Electric Association  
(cooperative)

**RENEWABLE MIX:** 80 percent hydropower,  
20 percent wind<sup>8</sup>

- In 2007, Kodiak got 20 percent of its power from diesel generators and the remainder from hydropower. Diesel fuel prices were unpredictable, so the town installed three wind turbines.<sup>9</sup>
- As an isolated power grid, Kodiak cannot not rely on other power plants if wind power fluctuations cause production to dip below demand. To mitigate this risk, Kodiak installed an industrial battery bank and a 6.5 ton flywheel to meet the energy spike required of its massive commercial shipping crane.<sup>10</sup>

## Greensburg, Kansas



**POPULATION:** 778<sup>11</sup>

**100% RENEWABLE STATUS:** Achieved  
2013

**UTILITY:** Greensburg Public Works  
(municipal)

**RENEWABLE MIX:** 100 percent wind<sup>12</sup>

- In 2007, a tornado completely devastated Greensburg and its infrastructure. This disaster gave the town an opportunity to think how it wanted to build its infrastructure from the ground up.<sup>13</sup>
- The town wanted to save money by consuming less, achieve energy independence, and avoid the fluctuations in the price of traditional energy sources. Thus it turned to wind power.<sup>14</sup>

## Burlington, Vermont



**POPULATION:** 42,239<sup>15</sup>

**100% RENEWABLE STATUS:** Achieved 2014

**UTILITY:** Burlington Electric (municipal)

**RENEWABLE MIX:** 44 percent biomass, 35 percent hydropower, 19 percent wind, 2 percent solar<sup>16</sup>

- Burlington sought energy independence and was already partially using hydropower. It decided to move from coal burning to renewable biomass for the remainder.<sup>17</sup>
- While cost of biomass is slightly higher than traditional energy sources, Burlington buys and sells renewable credits from different states to make up the difference.

## Taos County, New Mexico



**POPULATION:** 32,795<sup>18</sup>

**100% RENEWABLE STATUS:** Committed 2030

**UTILITY:** Kit Carson Electric Cooperative (cooperative)

**RENEWABLE MIX:** Currently 24 percent of daytime power is provided by solar<sup>19</sup>

- Renewable Taos, a nonprofit advocacy organization, campaigned local leaders to commit to 100 percent renewable by 2030. After making the commitment, the local power cooperative began negotiating an exit from their long-term power supply deal that limited them from achieving the goal.
- Due to the large drop in renewable prices, the new electricity provider was able to cover the early termination penalty with the old provider and still provide lower cost energy at more stable prices than previously available to residents.<sup>20</sup>
- New solar arrays are being built every year in the county, and the cooperative is hoping to provide 100 percent of daytime energy needs with solar by 2022.



## St. Louis, Missouri



**POPULATION:** 308,626<sup>21</sup>

**100% RENEWABLE STATUS:** Committed, 2035

**UTILITY:** Ameren Corporation (publicly traded)

**RENEWABLE MIX:** Currently at 5 percent renewable<sup>22</sup>

- St. Louis' Board of Aldermen sought to position the city as a renewable energy leader among its peer cities while also addressing widespread smog and asthma problems.<sup>23</sup>
- Ameren Corporation, St. Louis' electric utility, announced earlier in 2018 that it plans to widely expand wind and solar generation. The power company has set a goal of reducing its carbon footprint by 80 percent by 2050, in response to consumer demand.<sup>24</sup>
- While St. Louis is the home to two of coal's largest companies, Peabody Energy and Arch Coal, it is also the home to Anheuser Busch InBev and Nestle Purina, both of whom have committed to 100 percent renewable energy goals.<sup>25</sup>

## Atlanta, Georgia



**POPULATION:** 486,290<sup>26</sup>

**100% RENEWABLE STATUS:** Committed, 2035

**UTILITY:** Georgia Power, subsidiary of Southern Company (publicly traded)

**RENEWABLE MIX:** Currently approaching 2 percent renewable provided by solar<sup>27</sup>

- In 2017, Atlanta committed to running all municipal facilities, including its airport, on 100 percent renewable power.
- Atlanta's City Council passed this measure to combat energy costs for cooling a city where temperatures are over 90 degrees for one-third of the year.<sup>28</sup>
- Atlanta's plan has a three-prong approach that seeks to reduce demand – 1) an energy audit to find opportunities for greater energy efficiency; 2) increase renewable energy sources to take advantage of future cost savings as technology improves; and 3) purchase renewable energy credits to offset purchases from traditional energy sources

## Hawaii



**POPULATION:** 1.42 million<sup>29</sup>

**100% RENEWABLE STATUS:** Committed, 2045

**UTILITY:** Hawaiian Electric (publicly traded)

**RENEWABLE MIX:** Currently at 27 percent renewable provided by wind, solar, geothermal, biomass, and hydropower<sup>30</sup>

- The Hawaiian government wanted to wean the state from its dependence on costly imported traditional energy sources. Its isolation from the mainland and its lack of overlapping grids made it an ideal testbed for new renewable technologies and regulatory models.<sup>31</sup>
- Hawaii has the benefit of having four major renewable energy sources - solar, wind, hydropower, and geothermal. The state sees the potential economic benefits in new startups and jobs associated with renewable energy.
- Hawaii also adopted the plan based on its economy's dependence on tourism and its natural environment, which in turn is heavily impacted by climate change.

## California



**POPULATION:** 39.5 million<sup>32</sup>

**100% RENEWABLE STATUS:** Committed, 2045

**UTILITY:** Multiple

**RENEWABLE MIX:** In 2017, 29.0 percent of California's electricity came from renewable energy sources, including a mix of hydropower, solar, wind, geothermal, and biomass<sup>33</sup>

- California is seeking to reduce pollution and carbon emissions that affect it at a local, national, and global level, as well as increasing jobs in the renewable energy field.
- California currently imports 33 percent of its electricity from out of state and is seeking to ultimately produce enough energy to be self-sustaining.<sup>34</sup>
- As the third largest domestic producer of oil and gas and the most populous state, California faces unique challenges in transitioning to 100 percent renewable energy and will be a testbed for the country.

- 
- 1 <https://www.sierraclub.org/ready-for-100/commitments>
  - 2 <http://there100.org/companies>
  - 3 <https://www.census.gov/quickfacts/georgetowncitytexas>
  - 4 <https://gus.georgetown.org/renewable-energy-faqs/>
  - 5 <https://www.npr.org/2017/03/07/519064002/texas-city-leads-the-way-on-renewable-energy>
  - 6 <https://www.theguardian.com/environment/2017/oct/16/texas-town-georgetown-energy-green>
  - 7 <https://www.census.gov/quickfacts/fact/table/kodiakislandboroughalaska/INC110216>
  - 8 <https://www.greenbiz.com/article/how-one-alaskan-island-went-100-renewable>
  - 9 <https://www.pbs.org/newshour/show/how-the-second-busiest-u-s-fishing-port-is-powered-by-wind-and-water>
  - 10 <https://www.ktoo.org/2017/09/15/kodiak-almost-100-percent-renewable-power-took-sci-fi-tech-get/>
  - 11 [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml?src=bkml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkml)
  - 12 <https://cleantechnica.com/2016/07/18/greensburg-ks-destroyed-wind-now-100-wind-powered-video/>
  - 13 <https://thinkprogress.org/this-small-town-shows-how-clean-energy-can-win-in-the-most-conservative-areas-2433fd044d32/>
  - 14 <https://cleantechnica.com/2016/07/18/greensburg-ks-destroyed-wind-now-100-wind-powered-video>
  - 15 <https://www.census.gov/quickfacts/burlingtoncityvermont>
  - 16 <https://www.sanders.senate.gov/vermont/burlington-electric-department-leads-the-way-on-energy-efficiency-and-renewable-energy>
  - 17 <https://www.politico.com/magazine/story/2016/11/burlington-what-works-green-energy-214463>
  - 18 [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml?src=bkml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkml)
  - 19 <https://kitcarson.com/electric/100-daytime-solar-energy-by-2022>
  - 20 <https://renewabletaos.org/wp-content/uploads/A-New-Mexico-electricity-co-op-declares-its-independence-HighCountryNews.pdf>
  - 21 <https://www.census.gov/quickfacts/stlouismissouri>
  - 22 <https://www.usnews.com/news/best-states/missouri/articles/2017-10-27/st-louis-to-transition-to-100-percent-renewable-energy>
  - 23 [https://www.stltoday.com/business/local/aldermen-pass-resolution-for-st-louis-to-pursue-percent-clean/article\\_3dcd5d0c-38c6-5d10-ba7e-4a76b2f4ecff.html](https://www.stltoday.com/business/local/aldermen-pass-resolution-for-st-louis-to-pursue-percent-clean/article_3dcd5d0c-38c6-5d10-ba7e-4a76b2f4ecff.html)
  - 24 <http://ameren.mediaroom.com/2018-05-21-Ameren-Missouri-Planning-Largest-Wind-Farm-in-the-State>
  - 25 <https://www.bisnow.com/st-louis/news/sustainability/long-a-coal-town-st-louis-commits-to-100-renewable-energy-80997>
  - 26 <https://www.census.gov/quickfacts/fact/table/atlantacitygeorgia/PST045217>
  - 27 <https://www.bizjournals.com/atlanta/news/2018/06/25/atlanta-seeking-to-push-back-its-clean-energy.html>
  - 28 <https://www.sierraclub.org/sierra/can-atlanta-run-entirely-renewable-energy-2035>
  - 29 <https://www.census.gov/quickfacts/hi>
  - 30 <https://www.hawaiianelectric.com/hawaiian-electric-companies-achieved-27-percent-renewable-energy-in-2017>
  - 31 <https://www.utilitydive.com/news/hawaii-far-from-100-renewables-but-running-ahead-of-schedule-state-find/527171/>
  - 32 [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml?src=bkml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkml)
  - 33 [http://www.energy.ca.gov/almanac/electricity\\_data/total\\_system\\_power.html](http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html)
  - 34 <https://www.forbes.com/sites/trevornace/2017/08/01/california-goes-all-in-100-percent-renewable-energy-by-2045/#6b5c5007570f>