

EQUITABLE STRATEGIES FOR RENEWABLE ENERGY

THE PROBLEM

Without a movement powerful enough to win bold solutions to the climate crisis, over the coming years low-income communities and communities of color, like the residents of Isle de Jean, LA who are the nation's first 'climate refugees', will bear the brunt of a tremendous and avoidable disaster.¹

Beyond just mitigating the most catastrophic of climate impacts, however, the work of progressive elected officials and allies should be to seize the unparalleled opportunity presented by the climate crisis to fundamentally rebuild society in a more just and equitable fashion. With social infrastructure reliant on fossil fuels, to mitigate the impacts of climate change is to address how all of the systems of modern life – our buildings, housing, transportation, energy, food, and more – are powered and structured. If we are to avert the worst of the climate crisis, we must rebuild these systems in ways that promote equity and justice.

THE SOLUTION

Renewables are a critical part of the effort to reduce greenhouse gas emissions and address climate change, and cities can play a huge role in their development. Across the country, cities like **Burlington, VT**, **Greensburg, KS**, **Aspen, CO** and **San Diego, CA** are committing to plans to switch from carbon-intensive fossil fuels to 100% renewable energy.

Cities and local governments have the power to transform the production and supply of energy in this nation by using their collective political and purchasing power to influence utilities and by regulating to support the development of utilization of renewable energy sources within their communities. Many local governments that pursue these strategies have done so with a focus on equitable approaches that lower energy costs, increase reliability of service, and democratize energy ownership.

MUNICIPALIZATION

Municipalization involves a city or county taking control of its electric or gas system from an Investor Owned Utility (IOU) or Rural Electric Cooperative (Coop). Currently, there are more than two thousand municipal electric companies in the United States serving more than 43 million people.² On the whole, they enjoy lower and more stable rates, higher reliability, and greater responsiveness to residents. Municipalization is also a strategy for cities to respond to consumer demand and provide more energy from renewable sources. Following two public referendums, officials in **Boulder, CO** are taking active steps towards creating a public utility as a way to increase energy efficiency, local renewable energy, and democratic control of the city energy system.³

The prospect of municipalization can itself be a powerful and mobilizing force. In **Minneapolis, MN** a group of activists put forward a proposal to create a municipal power company, advocating for a citywide referendum coinciding with the expiration of the city's contracts with two investor-owned utilities. This pressure led to the creation of the first of its kind "clean energy partnership" between the utilities and the city of Minneapolis. The partnership included the creation of a board of public and utility officials to push for energy efficiency and renewable energy programs, including efforts to create "green zones" to improve energy conservation in high risk neighborhoods.⁴

COMMUNITY CHOICE AGGREGATION

Established by law in seven states thus far,⁵ community choice aggregation (CCA) allows local governments to pool their electricity load in order to purchase power on behalf of their residents, businesses, and municipal accounts. Together, the pooled group can leverage their combined demand to lower rates,

increase the supply from renewable sources, establish local control over the utility, and generate local jobs.

In the CCA model, local governments work in partnership with the region's existing utility to determine rates and energy sources. Like municipal utilities, CCAs offer cost efficiencies, flexibility, and local control, but they do not face the same financial and operational burdens of owning their own utility. The most successful CCA agreements are usually "opt-out," in which all citizens are enrolled in the program collectively when legislation is passed, but they have the choice of switching back to utility service at any time.⁶

As of 2013, approximately 2.4 million customers were participating in CCAs that source renewable energy, totaling more than 9 million MWh of renewable energy.⁷ In **Cleveland, OH**, around 65,000 residents and small businesses participate in the city's community purchasing program that uses 100% renewable sources. Participants receive a 21 percent electricity bill savings off the market rate.⁸ Recently, energy advocates in **Westchester, NY** successfully lobbied the state to allow them to implement a CCA program in the county.⁹

MICROGRIDS

Microgrids are smaller, local grids that can incorporate multiple local power sources to supply power in its area. These localized systems are completely customizable, and can generate power from a variety of sources including solar cells, wind farms, geothermal, and fuel cells. Microgrids typically operate parallel to the central grid, alternately feeding the central grid extra energy produced or buying energy when it needs to, and many can also function independently as islands, completely separate from the central grid.¹⁰

One benefit of microgrids is reliability. With a microgrid, a community can continue to provide power even if the central grid fails. For example, **New York City's Co-Op City**, one of the largest housing cooperatives in the world, is home to a community microgrid that includes a 40-MW combined heat and power plant that serves 14,000 apartments in 35 towers. During Superstorm Sandy, when power outages blanketed the Northeast, the microgrid continued to provide electricity, heat, hot water, and air conditioning for 60,000 residents.¹¹ This independence is especially powerful for low-income communities and communities of color that are often the last to see power restored after a crisis.

A pilot project in **Hunters Point in San Francisco** aims to prove that local renewables can supply a significant amount of total electric energy consumption, while maintaining or improving power quality, reliability, and resilience. Hunters Point is a community that has struggled for decades with

poverty, unemployment, and toxic waste following the closing of a shipyard. The community's microgrid will generate at least 25 percent of the local electric energy consumption by deploying 50 MW from solar installations on rooftops or parking lots, serving about 20,000 residential and commercial customers. The project designers estimate that the microgrid will reduce greenhouse gas emissions by 78 million pounds and save 15 million gallons of water annually.¹²

Microgrids are also good economic policy as they increase energy efficiency and lower energy costs. With local production, less energy is wasted through long transmission lines, and local siting of power generation allows users to capture the heat produced from energy production to heat water and buildings. Microgrids are also less costly than building new substations or transmission and distribution lines. The Hunters Point Community Microgrid, mentioned above, would not only add a significant amount of renewable energy to San Francisco. It is predicted to contribute \$233 million to the regional economy and avert \$80 million in transmission related costs over 20 years.¹³

NOTES

- 1 http://www.nytimes.com/2016/05/03/us/resetting-the-first-american-climate-refugees.html?_r=0
- 2 <http://www.nepower.org/who-we-are/public-power/>
- 3 <http://communitypowernetwork.com/node/990>, <https://bouldercolorado.gov/energy-future>
- 4 <http://midwestenergynews.com/2014/10/17/minneapolis-utility-fight-ends-with-unique-clean-energy-deal/>
- 5 CCA is statutorily enabled in CA, IL, OH, MA, NJ, RI, and most recently, NY.
- 6 <http://www.leanenergyus.org/what-is-cca/>
- 7 http://apps3.eere.energy.gov/greenpower/markets/community_choice.shtml
- 8 <http://www.sustainablecitiesinstitute.org/cities/cleveland-ohio>
- 9 <http://www.capitalnewyork.com/article/albany/2015/02/8563054/state-approves-westchester-power-experiment>
- 10 A recent publication, "Community Microgrids: A Guide for Mayors and City Leaders," can provide local officials with more detailed information about creating and operating a microgrid. You can download the guide at <http://microgridknowledge.com/microgridknowledge-com-releases-guide-on-community-microgrids-for-mayors-and-city-leaders/>.
- 11 <http://w3.siemens.com/topics/global/en/sustainable-cities/resilience/pages/microgrid-infrastructure.aspx>
- 12 http://www.clean-coalition.org/site/wp-content/uploads/2012/10/HPP-Benefits-Analysis-Summary-21_gt-26-Mar-2014.pdf
- 13 http://www.clean-coalition.org/site/wp-content/uploads/2012/10/HPP-Benefits-Analysis-Summary-21_gt-26-Mar-2014.pdf