



## Benefits of Community Choice Energy for the City of Chelsea

This Applied Economics Clinic policy brief—prepared on behalf of GreenRoots, a Chelsea-based organization working to achieve environmental justice—presents ways in which Community Choice Energy (CCE) programs can provide important benefits for vulnerable communities, including better community control and participation in energy choices, protection from predatory suppliers, more renewable content, and lower costs than Eversource and National Grid’s basic electric service rates.

### Benefits of Community Choice

Adopting a Community Choice Energy (CCE)<sup>1</sup> policy allows a city to select an electric supplier on behalf of its residents and achieve greater bargaining power in setting energy costs by pooling customers together. As of July 2020, 106 towns in Massachusetts (more than a quarter of the 351 municipalities in the Commonwealth) have active CCE programs (and 7 are in development).

In October 2019, Chelsea’s City Council voted to require the City Manager to develop a CCE policy for their final approval. This Applied Economics Clinic policy brief complements our November 2019 brief (which examined the cost and emission savings of different potential designs for CCE programs in Chelsea) by summarizing three important community benefits of CCE programs for the City’s consideration:

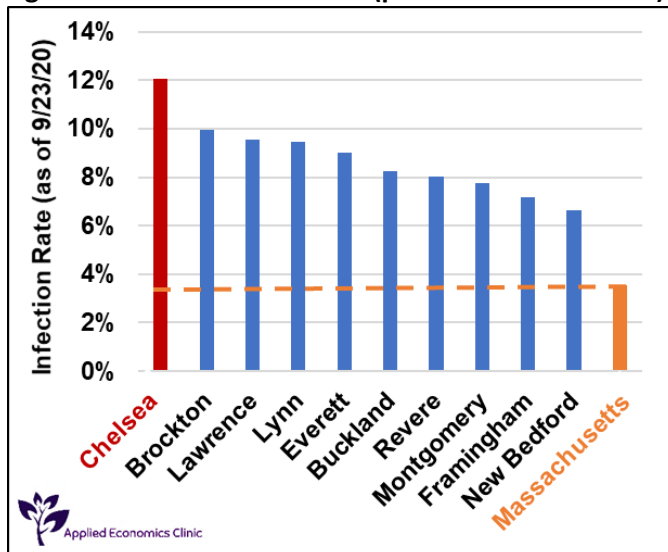
- enhanced community control and participation;
- increased renewable energy; and
- reduced cost of energy (see Table 1).

As of September 2020, Chelsea is reeling from the impacts of COVID-19, with the highest infection rate in the Commonwealth—over three times the state average (see Figure 1).<sup>2</sup> The City’s current health crisis is the result of many factors, including evidence that high levels of air pollution lead to greater vulnerability to COVID.<sup>3</sup> As the City recovers from the pandemic and moves forward on its CCE program, this policy brief may serve to illuminate how greater community choice and control over electric services can help Chelsea take more ownership of its energy system and reduce regional pollution from fossil fuels while saving residents money.

Table 1. Community benefits of CCE programs

Benefit	Equity Implication
Better community control and participation	Give residents a say in their energy sources
Protection from predatory suppliers	Shield vulnerable communities from predatory third-party suppliers
More renewable energy	Renewable energy sourced from New England displaces fossil fuels reducing pollution concentrated in vulnerable communities
Lower cost of energy	Lower electric rates than the default utilities, lessening the energy burden of low-income households

Figure 1. COVID infection rate (percent of total tested)





## CCE programs protect consumers from predatory energy suppliers

CCE programs are possible due to a Massachusetts law that allows individual customers to choose to purchase energy from competitive energy providers (instead of their “default” energy utility: for Chelsea, Eversource).

Regrettably, this law has also resulted in predatory practices targeting vulnerable populations, like low-income, minority and elderly households. An investigation by the Massachusetts Attorney General’s office found that low-income households were more likely to receive their energy from competitive suppliers and to pay more for their energy than the electric rates offered by their default provider.

In Chelsea, 34 percent of households get their energy from a competitive supplier—a substantially higher share than the state average of 19 percent. Between 2017 and 2018, Chelsea’s electric customers paid a combined total of \$25,500 per month more than they would have paid under utility default rates (see Table 2).<sup>4</sup> This is 79 percent higher than the statewide average loss from predatory suppliers of just over \$14,000 per month.

**Table 2. Predatory energy suppliers**

	Chelsea	State Average
Households with a competitive energy supplier (%)	34%	19%
Monthly total customer losses (\$)	\$25,463	\$14,051

CCE programs protect residents from predatory third-party suppliers by negotiating with competitive power suppliers to secure reliable, low-cost, long-term electric supply contracts with fixed prices on behalf of all participants and by keeping their residents informed about the energy choices being made on their behalf. Cities and towns implementing CCE programs must

inform residents and businesses at least 30 days ahead of time about the CCE program going into effect and must offer the option to opt-out of the program anytime at no cost. Many programs also offer customers the ability to opt-up—that is, to purchase electricity with greater renewable content. Residents are informed about the CCE program by mail, in public meetings, press releases, newspaper articles and notifications—to ensure consumer awareness.

## CCE programs enhance community control and participation

CCE programs facilitate community control over energy choices by allowing residents to have a say in what kind of electric power they use and where it comes from. This is especially beneficial in “Environmental Justice”<sup>5</sup> communities like Chelsea. Massachusetts’ Environmental Justice Policy was designed to redress these communities’ disproportionate exposure to pollution and lack of equal environmental protection.

Chelsea faces more than its “fair” share of negative environmental consequences: the Chelsea creek is home to 100 percent of the jet fuel used at Logan Airport and 70-80 percent of New England’s heating fuel. Chelsea is home one of the largest produce distribution centers in the country and the largest road salt storage facility in the region (which serves over 350 communities in the Northeast). The city’s contaminated air and water impact public health: Rates of asthma, chronic respiratory disease, major cardiovascular disease and strokes in Chelsea are among the highest in the Commonwealth. Greater community control over—and participation in—energy decisions provides an opportunity for those who bear the greatest harm from current energy systems to play a role in reshaping energy choices moving forward.

To receive Massachusetts state approval for their CCE programs, towns must include information about public participation, education, and outreach in their CCE program applications to the Massachusetts Department



of Public Utilities (DPU). These submissions reveal that, in launching their CCE programs, towns engaged in public outreach and education efforts to explain CCE programs and their benefits, public review processes to gain input on proposed CCE plans, and multilingual CCE communications regarding program details and no-penalty customer opt-out options (see Table 3).

**Table 3. Examples of CCE program public participation**

Town	Example
Arlington	Made its CCE plan available for public review and solicited input at public meetings. Launched a public education initiative to inform customers of the program's benefits. Plans to continue targeted media campaigns, public meetings, and informational sessions.
Bedford	Made its CCE plan available for public review online, offered translation services and solicited feedback at public meetings. A public outreach and education briefed residents on the program's key details.
Scituate	Sent CCE program information and notifications in the native language of any population representing 1 percent or more of Scituate's ratepayers. Provides an online option to translate written material into over 100 languages.
Somerville	Solicited community input on proposed CCE plan at town hall meetings and in written comments online. Provided residents with program information in multiple languages.

Facilitating public participation in energy decision-making is a critical step in achieving social justice and equity goals. CCE provides a way for Massachusetts cities and towns to create active stakeholders; the more fully a community is represented during decision-making, the better decisions reflect the concerns and challenges faced by the entire community.

Enhancing awareness about the need for (and benefits of) renewable energy is another way that CCE public participation can help achieve climate justice and equity

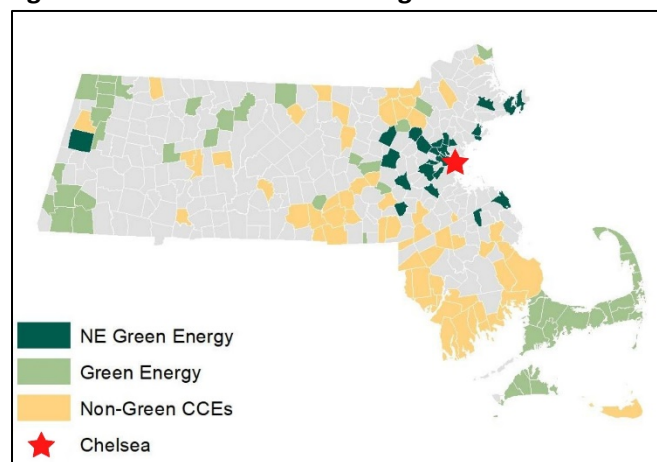
goals—by reducing the demand for polluting resources, which disproportionately impact Environmental Justice communities. The CCE programs best suited to accelerating renewable energy development are those with a “green default,” meaning that the automatic program enrollment option includes more renewable energy than mandated by state law.

### CCE programs add renewables

In Massachusetts, both CCE programs and default electric suppliers must source at least as much renewable energy as mandated by state law (20 percent in 2020, growing by 2 percentage points each year). CCE programs can (and do) mandate more renewables than required by state law and can (and do) mandate that their renewable energy requirements must be met with renewable sources from the region.

Of the 106 CCE towns in Massachusetts, 28 have programs in place that mandate more renewables than Commonwealth law but do not specify where that energy must come from (“Green Energy” in light green Figure 1 below) and 22 mandate more renewables than Commonwealth law and specify that these renewables must originate from New England (“NE Green Energy” in dark green in Figure 2).

**Figure 2. Massachusetts CCE Programs**



When the renewable energy sourced by CCE programs originates from New England, the supply of regional



renewable energy increases, displacing gas, oil and biomass plants that are disproportionately sited in or near low-income communities of color. Socially vulnerable groups are more likely to experience negative health impacts from energy pollution, and receive greater benefits from eliminating energy pollution.

Replacing local fossil fuels with renewables reduces pollution, improves air quality, lowers healthcare expenses, and limits utility infrastructure (like transmission and distribution lines) sited in socially vulnerable neighborhoods. Environmental Justice communities like Chelsea often have less capacity to influence and/or reject energy-related developments in their neighborhoods, due to lack of financial resources, language barriers, and other barriers to information.

In 2020, Commonwealth law mandates that 20 percent of statewide electric sales originate from renewable energy sources. Statewide electric sales total 49 GWh—in 2020, this means that 9.8 GWh of these sales must originate from renewable sources. Among Green Energy and NE Green Energy CCE towns:

- Electric sales<sup>6</sup> of the 52 Massachusetts towns that have a Green Energy or NE Green Energy CCE program total 12.4 GWh—equivalent to 25 percent of all electric sales in Massachusetts (see Table 4).
- If these 52 towns buy only enough renewable energy to comply with the state law (that is, each town procures 20 percent of its sales from renewable sources), they would procure 2.5 GWh (equivalent to 5 percent of total state electric sales).
- The “extra” renewable content facilitated due to their Green Energy and NE Green Energy mandates (above and beyond the required 20 percent) adds 5.1 GWh more renewable energy.
- This brings the total renewable content sourced by current Green Energy and NE Green Energy CCE programs in Massachusetts to 7.6 GWh (equivalent

to a 65 percent renewable requirement for their towns or 16 percent of total state electric sales).

If every Massachusetts town mandated 65 percent renewable energy in 2020 (instead of just 20 percent), renewables would total 31.8 GWh—or an additional 22.0 GWh of renewable energy above what is mandated by state law.

**Table 4. Renewable energy from Massachusetts “Green Energy” and “NE Green Energy” CCE programs**

	GWh	% of total state sales
Total Green Energy and NE Green Energy electric sales	12.4	25%
Renewable energy mandated by state law	2.5	5%
"Extra" renewable energy from Green/NE Green CCE programs	5.1	11%
Total renewable energy sourced by Green/NE Green CCE programs	7.6	16%

## CCE programs reduce customers' energy bills

All of Massachusetts' current CCE programs offer lower rates than the town's default utility service: 6 to 10 percent less expensive than Eversource basic service rates and 10 to 15 percent less expensive than National Grid basic service rates (see Table 5 below). While Non-Green CCE programs offer the lowest rates—Green Energy and New England Green Energy CCE customers are still saving 6 to 15 percent compared to Eversource and National Grid basic service rates.

Assuming statewide standard residential electric use, the average Chelsea household stands to save between \$8 and \$11 per month (or between \$100 and \$135 dollars per year) on their electric bills with a CCE program, as opposed to paying Eversource rates (see Table 6 below).





**Table 5. Average Massachusetts CCE residential rate versus default basic service rates (2019-2020)**

	Average Residential Rate	Cost Difference from Default Provider
<b>Eversource</b>	<b>11.7¢</b>	<b>N/A</b>
Non-Green Energy	10.5¢	10% lower
Green Energy	10.7¢	9% lower
NE Green Energy	11.0¢	6% lower
<b>National Grid</b>	<b>12.4¢</b>	<b>N/A</b>
Non-Green Energy	10.5¢	15% lower
Green Energy	10.5¢	15% lower
NE Green Energy	11.1¢	10% lower

**Table 6. Average Chelsea household monthly electric bills**

	Average Monthly Residential Bill	Monthly savings over Eversource
<b>Eversource</b>	<b>\$70.83</b>	<b>N/A</b>
Non-Green Energy	\$59.50	\$11.32
Green Energy	\$60.18	\$10.65
NE Green Energy	\$62.57	\$8.26

Saving money on electric bills is of particular benefit to low-income families paying a disproportionately higher share of their income in energy costs. In Metro Boston, for example, the median household (across all incomes) spends less than 3 percent of its monthly income on energy. In contrast, the median low-income household in Boston spends 7 percent of its monthly income on energy.

CCE programs offer important benefits for environmental justice communities like Chelsea, and particularly for its most vulnerable households. While any CCE program design will help protect families from predatory energy suppliers and lower energy bills, seeking greater amounts of renewable energy than mandated by state law in its CCE program helps the Commonwealth shift away from fossil fuels more rapidly. The faster the state makes the transition to clean energy sources, the more quickly exposed frontline communities like Chelsea are protected from negative impacts of fossil fuel-based energy systems.

## Notes

<sup>1</sup> CCE is also referred to as municipal aggregation or Community Choice Aggregation.

<sup>2</sup> According to the Massachusetts Department of Public Health data from September 24, 2020, Chelsea has an infection rate of 7,816 per 100,000 people—the highest in the state. The state average is 1,491 per 100,000. Available at: <https://www.mass.gov/doc/covid-19-raw-data-september-24-2020/download>.

<sup>3</sup> Wu, X., Nethery, R.C., Sabath, B.M., Braun, D.B. and Dominici, F. In Press (as of September 25, 2020). “Air pollution and COVID-19 mortality in the United States: strengths and limitations of an ecological regression analysis.” Harvard University. Available at: <https://projects.iq.harvard.edu/covid-pm>.

<sup>4</sup> Office of the Attorney General. August 2019. “Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts.” Commonwealth of Massachusetts. Available at: [https://www.mass.gov/files/documents/2019/07/31/Massachusetts%202019%20Update\\_August%202019.pdf](https://www.mass.gov/files/documents/2019/07/31/Massachusetts%202019%20Update_August%202019.pdf). Appendix 2B.

<sup>5</sup> Massachusetts’ “Environmental Justice” designation is assigned to communities that meet any of the following criteria: an annual mean household income less than or equal to 65 percent of the state median; 25 percent or more residents identify as a race other than white; or 25 percent or more of all households have no one over the age of 14 who speaks English very well.

<sup>6</sup> Electric sales data are from 2016: the most recent year’s data available from Mass Save.



## Works Cited

Congi, S. April 30, 2020. "Air pollution may increase risk of dying from COVID-19, study says." *WCVB*. Available at: <https://www.wcvb.com/article/air-pollution-may-increase-risk-of-dying-from-covid-19-study-says/32328168>.

DeCosta-Klipa, N. April 10, 2020. "Why the city of Chelsea has been so hard hit by coronavirus." *Boston.com*. Available at: <https://www.boston.com/news/local-news/2020/04/10/chelsea-massachusetts-coronavirus>.

Dharmaraj, V. July 21, 2018. "MBTA should prioritize electric transit in Chelsea and other environmental justice communities." *GreenRoots*. Available at: <http://www.greenrootschelsea.org/news/2018/8/1/mbta-should-prioritize-electric-transit-in-chelsea-and-other-environmental-justice-communities>.

Dominguez-Santos, L. May 2, 2020. "COVID-19's link to environmental racism." *CommonWealth*. Available at: <https://commonwealthmagazine.org/opinion/covid-19s-link-to-environmental-racism/>.

Doolling, S. July 26, 2017. "'Hit First And Worst': Region's Communities Of Color Brace For Climate Change Impacts." *WBUR*. Available at: <https://www.wbur.org/news/2017/07/26/environmental-justice-boston-chelsea>.

Drehobl, A. and Ross, L. 2016. Lifting the High Energy Burden in America's Largest Cities. *American Council for an Energy-Efficient Economy*. Appendix B. Available at: <https://www.aceee.org/sites/default/files/publications/researchreports/u1602.pdf>.

MA Department of Public Health. April 22, 2020. "Coronavirus Disease 2019 (COVID-19) Cases in MA." Available at: <https://www.bostonherald.com/wp-content/uploads/2020/04/covid-19-city-town-4-22-2020.pdf>.

MA Department of Public Utilities (DPU) Docket No. 17-178. June 2019. Petition Supporting Documents for the Town of Bedford Municipal Aggregation Plan. Submitted by the Town of Bedford. Available at: <https://bedfordcca.com/wp-content/uploads/2019/06/Bedford-Updated-Aggregation-Plan-06052019.pdf>. p.2.

MA DPU Docket No. 16-100. April 2017. Town of Arlington - Municipal Aggregation Plan. Submitted by Scott J. Mueller. Available at: <https://arlingtoncca.com/wp-content/uploads/2016/11/cca-plan-updated-april-2017.pdf>. p.7-8.

MA DPU Docket No. 16-95. June 2016. Petition Supporting Documents for the City of Somerville Municipal Aggregation Plan. Available at: <https://www.somervillema.gov/sites/default/files/community-choice-aggregation-cca-plan.pdf>. p. 7.

MA DPU Docket No. 19-\_. 2019. Petition Supporting Documents for the Town of Scituate Municipal Aggregation Plan. Submitted by the Town of Scituate. Available at: [https://www.scituatema.gov/sites/scituatema/files/alerts/scituate\\_aggregation\\_documents\\_-\\_20190713.pdf](https://www.scituatema.gov/sites/scituatema/files/alerts/scituate_aggregation_documents_-_20190713.pdf). p. 55-58.

MA Executive Office of Energy and Environmental Affairs. 2017. "Environmental Justice Policy." Available at: [https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy\\_0.pdf](https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy_0.pdf).

Office of the Attorney General. August 2019. "Are Consumers Benefiting from Competition? An Analysis of the Individual Residential Electric Supply Market in Massachusetts." *Commonwealth of Massachusetts*. Available at: [https://www.mass.gov/files/documents/2019/07/31/Massachusetts%202019%20Update\\_August%202019.pdf](https://www.mass.gov/files/documents/2019/07/31/Massachusetts%202019%20Update_August%202019.pdf).

Stanton, E.A. and Woods, B. March 2020. AEC Climate and Social Equity Framework. Applied Economics Clinic. Available at: <https://aeclinic.org/publicationpages/2020/2/24/aec-climate-and-social-equity-framework>.

Woods, B., Alisalad, S. and Brown, H. November 2019. Cost and Emission Impacts of Community Choice Energy: Renewable Energy Options for the City of Chelsea. *Applied Economics Clinic*. Available at: <https://aeclinic.org/publicationpages/2019/11/5/cost-and-emission-impacts-of-community-choice-energy-renewable-energy-options-for-the-city-of-chelsea>.

Wool, J. 2018. People's Electric Power: Community Energy Solutions to Empower Democracy and Combat Climate Change. Tufts University: Urban and Environmental Policy and Planning, Master of Arts Thesis.