

Increasing Building Energy Efficiency and Electrifying Buildings

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Introduction

Buildings, both residential and commercial, make up 25% of greenhouse gas emissions in the Genesee-Finger Lakes Region (see [2022 Genesee-FLX Climate Action Strategy](#) for more information), largely from the natural gas used to heat buildings and power stoves, water heaters, and dryers. According to [New York's 2022 Climate Action Scoping Plan](#), more than 250,000 homes and thousands of commercial buildings each year will need to be retrofitted for energy efficiency and electrification, a tenfold increase from annual adoption today. **Increasing energy efficiency and electrification can make homes more comfortable and healthier and reduce GHG emissions.** There are, however, several structural barriers to reducing emissions in the building sector including:

1. upfront costs of technology and difficulty in financing such improvements,
2. an aging and deteriorating housing stock,
3. the difficulty of navigating local, state, and federal programs and incentives, and
4. the split incentive in rental properties (see this [blog from King Energy](#) for an explanation of the “split incentive problem”; you can also find information on the split incentive and strategies to overcome it on pages 19-21 of the [Adapting Energy Efficiency Programs to Reach Underserved Residents toolkit](#) from the American Council for an Energy-Efficient Economy (ACEEE)).

The following are actions that can be taken to **address barriers and increase building energy efficiency and electrification**.

Clean Heating and Cooling Campaign

Start or participate in a **community clean heating and cooling campaign**. This campaign may be done in partnership with your municipal government to earn your municipality points in the [Clean Energy Communities](#) and/or [Climate Smart Communities](#) programs; it can also be done independently. This campaign should:

1. educate community members about energy efficiency and electrification
2. connect community members with resources to improve energy efficiency of their homes and electrify their HVAC system and appliances
3. focus education and outreach efforts on low-moderate income (LMI) households and those most vulnerable to climate change impacts (if partnering with your municipal government, make sure to decide this together)

Steps to take:

1. Set goal(s) for the campaign.
 - a. Use the [SMARTIE Goal](#) framework to make goal(s):
 - Specific
 - Measurable
 - Achievable
 - Relevant
 - Time-bound
 - Inclusive
 - Equitable
 - b. [Contact an Amped Energy Advisor](#) for advice/support for the campaign.
2. Decide where to do the campaign.
 - a. The New York State [Disadvantaged Communities \(DACs\) Map for the Genesee-Finger Lakes Region](#) may help find places to target in your community (you may also be interested to see the New York State Energy Research and Development Authority (NYSERDA) [DACs Map for the entire state](#)).
 - b. Include people who live in the target areas throughout the process and work together to make sure the campaign fits with what's needed in those places.
 - c. Libraries, community centers, recreation centers, and houses of worship may provide space to use for events. They may also promote the events.
 - d. Virtual or hybrid events may help reach community members who would not attend an in-person event.
3. Organize team members (and consider recruiting additional volunteers) to carry out campaign activities. Determine which roles you need and who will take them on (one person may be able to take on multiple roles). Potential roles include:



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- a. Project manager(s) (if this campaign is done in collaboration with the municipal government, there should be one manager who is a staff member with the municipality and one manager who is a member of the CYCG team)
- b. Project spokesperson (to speak publicly or provide interviews/quotes)
- c. Course instructor(s)
- d. Writer (of articles in team newsletter, community publications, and/or websites)
- e. Social media content creator (for Facebook, Instagram, and/or other platforms)
- f. Outreach (to contact potential partners, distribute fliers, table at events, and/or do other community outreach activities)
- g. Follow-up (to support interested community members with accessing resources and completing projects on their homes)
- h. Data tracking

*It may be helpful to include people who have relevant experience, such as someone who has already electrified their house or a medical professional who can speak to the benefits of switching from gas to electric appliances.

4. Decide which education/outreach activities to do.
 - a. Consider how to effectively raise awareness of and promote your campaign.
 - In the ["Adapting Energy Efficiency Programs to Reach Underserved Residents" toolkit](#) created by ACEEE, there is a section on "how to tailor marketing based on customers' preferences and behaviors" (see pages 9-10 of their toolkit).
 - Tools of Change provides [resources on community-based social marketing](#).
 - b. You may want to include information about federal funding available for building energy efficiency and electrification through the Infrastructure Investment, and Jobs Act of 2021 (IIJA) and the Inflation Reduction Act of 2022 (IRA). Here are resources on that legislation that may be useful:
 - [Guide to the IRA from Rewiring America](#)
 - [Q&A on the IRA from Citizens' Climate Lobby \(CCL\)](#), which includes printable fliers
 - [Videos about both laws from the Climate Reality Project](#)
 - [IIJA implementation resources from the Government Finance Officers Association](#)
 - CCL live informational session on the IRA - contact the Rochester chapter of CCL if interested: nyrochester@citizensclimatelobby.org
 - c. *Examples of campaign activities that have been done previously:



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- Color Rush Green did a webinar on clean heating and cooling. Here is the [video recording](#) (1 hour, 17 minutes).
 - Color Penfield Green volunteers taught a class on all-electric home heating and cooling through the Penfield Recreation Department. A class video recording can be found on [Al Hibner's YouTube channel](#). He also has a [video showing how a ground-source electric heat pump got installed at his house](#).
 - Color Chili Green, with the support of the Climate Solutions Accelerator, mailed postcards to Chili residents with information on resources available to improve the energy efficiency of their homes.
 - Volunteers along with staff of Connected Communities and the Accelerator did door-to-door canvassing in the Beechwood and EMMA neighborhoods in Rochester to speak with residents about resources to improve energy efficiency. They left informational door knob hangers at the houses where no one was present.
 - HeatSmart Monroe volunteers tabled at farmers' markets around the region to share information about home weatherization and heat pumps with community members.
5. Prepare materials to be used in the campaign (for example, handouts).
- a. See the [Amped website](#).
 - It includes information on multiple [benefits to energy efficiency and electrification](#) as well as [connections to poverty, health, and household costs](#).
 - b. Include information to show how taking action will address multiple community needs, such as lowering utility bills, improving indoor air quality, improving health, increasing safety, and improving the comfort of people's homes.
 - This [CCL training](#) includes information on multiple benefits of building electrification and efficiency.
 - c. An [Amped Energy Advisor](#) may be able to provide brochures and/or door knob hangers (in English and Spanish) that can be distributed.
 - d. Do your best to make the information accessible to all community members. Consider that printed materials may need to be translated into other languages and interpreters may be needed for educational events.
6. Promote the campaign via:
- a. Word of mouth
 - b. Distribution of fliers
 - c. Social media



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- d. Online event page (can be made using EventBrite, for example) for event(s) scheduled as part of the campaign
- e. Online media (for example, Democrat and Chronicle, Rochester Beacon, or Orleans Hub)
- f. Printed media (for example, Democrat and Chronicle, Penny Saver, or Sentinel)
- g. Radio (for example, Connections on WXXI)
7. Carry out the campaign and keep track of data to determine the results and if you achieved your goal(s).

*Consider working together with your municipal government on this campaign to earn [Clean Energy Communities](#) points.

Advocate for Municipal Action

Advocate for your municipality to implement actions to improve building energy efficiency and encourage building electrification in your community, and to improve municipal building performance. Some of these actions may earn your municipality points in the [Clean Energy Communities](#) and/or [Climate Smart Communities](#) programs. Potential actions to advocate for your municipality to take include:

- Establish building benchmarking, which is a policy that a local government adopts that requires the annual reporting of energy used in municipal buildings
 - Here is a [Benchmarking Toolkit](#) from NYSERDA.
- Adopt NY State Stretch Code, which is a locally mandated code that is more aggressive than base code, resulting in buildings that achieve higher energy savings
 - Here are [NYStretch Adoption Resources](#) from NYSERDA.
- Provide incentives and grants for energy efficiency improvements, such as [Commercial Property Assessed Clean Energy \(C-PACE\) Financing](#)
 - Here is information from the U.S. Environmental Protection Agency (EPA) about [Local Utilities and Other Energy Efficiency Program Sponsors](#).
 - Here are [resources and publications from the State and Local Energy Efficiency Action Network \(SEE Action\)](#).
 - The ["Adapting Energy Efficiency Programs to Reach Underserved Residents" toolkit](#) created by ACEEE could be helpful for equitable distribution of incentives.
- Electrify public buildings, including municipal government and school district buildings
 - Here is a [case study about electrifying the Henrietta Public Library](#).
 - Here is a [Clean Energy Upgrades and Municipal Building Demo Toolkit](#) from NYSERDA.



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- Invest public dollars in projects that advance goals of [New York's Climate Leadership and Community Protection Act \(CLCPA\)](#) - see above for [information on federal funding available for building energy efficiency and electrification through the IIJA and IRA](#))
 - CLCPA goals include a net-zero greenhouse gas emissions economy by 2050 and at least 35% of benefits directed to [DACs](#).
- Establish a gap funding system for building retrofits
 - The [City of Ithaca](#) has partnered with [BlocPower](#) and Boston-based electrification partner, [Alturus](#), to work with local contractors to weatherize, optimize, and electrify all 6,000 buildings in the city while creating hundreds of new, good-paying jobs. The [Electrify Ithaca website](#) has information about their program.
 - This [Funding Gap Analysis For Residential Building Electrification For Berkeley, CA](#) was completed in 2022 by the Building Electrification Institute and includes an analysis of costs, gap assessment, identification of existing funding, and potential mechanisms to raise additional funds.
- Pilot a thermal energy network (a network of pipes to connect multiple buildings together and to thermal sources and sinks, such as geothermal, surface water, waste heat, and the air, to provide heating/cooling and hot water; this technology is an effective way to reduce greenhouse gas emissions) or establish laws/codes that make the process easier to site
 - Here is a [one-page information sheet on Thermal Energy Networks](#), prepared by [Alliance for a Green Economy \(AGREE\)](#) and HeatSmart Tompkins.
 - Here is [information about thermal energy networks, including pilot project proposals](#), from UpgradeNY.
 - Here is a [Thermal Energy Networks Toolkit](#) from NYSERDA.
 - Here are [step-by-step resources on how to move forward with a Community Heat Pump project \(which is a type of thermal energy network\)](#) from NYSERDA.
 - Here are [examples of Thermal Energy Networks](#) from the Building Decarbonization Coalition.
- Set minimum energy efficiency standards
 - Here are resources on energy efficiency standards:
 - [RMI's toolkit for Efficiency Standards for Rentals](#)
 - [ACEEE report on Mandatory Building Performance Standards: A Key Policy For Achieving Climate Goals](#)
 - [ACEEE's page on Energy Equity for Renters](#), which includes energy efficiency standards along with other information

Steps to take to advocate effectively:



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1. Assess your community - determine who potential partners are, what municipal committees already exist, and what challenges may arise.
 - a. The [CYCG Municipality Assessment Worksheet](#) will be helpful to use.
2. Build relationships with people in the municipal government (including elected and appointed officials). Meeting with them one-on-one or in small groups may be helpful. It is also important to maintain regular communication with them by email, phone, or whatever method works best.
3. Look for people in the municipal government who are more likely to support taking the actions you are advocating for. This may be an elected official or it may be a staff member (such as a sustainability official or an engineer)
4. Learn what motivates the decision-maker(s). Build an advocacy strategy based on what will effectively motivate them.
5. Research what your municipality has already done related to the action you want them to take. Is it already in process? Has it come up previously and, if so, what was the outcome? Are there individuals or organizations who have supported or opposed it in the past?
6. Build political will for the action(s) you are advocating for. Organize team members (and consider recruiting additional volunteers in your community) to lead advocacy efforts:
 - a. Determine which roles you need and who will take them on.
 - b. Empower each individual to be responsible for their role.
 - c. Maintain regular communication between organizers by meeting, text, Slack, phone calls, or whatever method(s) works best.
 - d. Decide which action(s) you need people in your community to take and then mobilize concerned citizens to take those actions, which may include:
 - Signing a petition
 - Emailing municipal officials
 - Calling municipal officials (consider doing a call relay)
 - Posting on social media and tagging elected officials
 - Writing about the issue in a local publication (printed and/or online)
 - Holding a lobby meeting with municipal officials
 - Speaking at municipal meetings (such as Village/Town Board or City Council meetings)
 - Organizing a rally or march
7. Periodically evaluate your progress and make changes to your strategy and process as needed.

Advocate in Utility Rate Cases

Advocate in utility rate cases (see [Rate Case 101 slides](#) for background information) when they occur (usually once every three years, with National Grid finishing a rate case in 2022 and RG&E and NYSEG finishing rate cases in 2023). Collaborate with other CYCG teams along with other concerned organizations (such as the Accelerator, [AGREE](#), [Metro Justice](#), and Eastern Services Workers Association) and concerned individuals on advocacy efforts. Mobilize team members and concerned citizens in your community to submit public comments to advocate for provisions to address energy equity and climate change:

- Written comments online
- Spoken comments at public hearing(s) - you may want to organize a group of team members to attend a hearing, including both speakers and those there to support them

Team members should consider advocating for the following in their comments:

- Equitable rate design - not disproportionately burdening low-income residents and people of color
- Ending winter shut-offs
- Opposing an increase in shareholder profits while people are left in the dark and the cold
- Energy as a human right
- Complying with the [CLCPA](#)
- Not spending money on gas infrastructure or rebates for gas appliances or marketing for gas products - gas pipelines will be retired before they're paid off, leaving us with the bill
- Making renewable heating affordable to everyone - increasing rebates for heat pump technologies, particularly for low-to-moderate income households, and making these rebates point of sale
- Providing weatherization and clean heating and cooling improvements with options to pay back over time through energy bills
- Installing district geothermal energy projects to make renewable heating available to all utility customers
- Easing the process of connecting renewable energy to the grid
- Coordinating with renewable energy suppliers to provide more timely and understandable billing
- Electric heat make-ready funding to upgrade electric panels to enable heat pump installations
- Making EV charging more accessible for low-to-moderate income households

Encourage team members to Go All Electric

Encourage team members to go all electric with their HVAC system and/or appliance replacements in their homes and/or businesses. Then encourage others in your community to do the same! Spread the word by:

- Getting a lawn sign to notify people of your all electric system (may be available from the installer of the system; ACES does lawn signs, for example)
- Holding an open house (invite neighbors and include elected officials)
 - You may also want to record a “video open house” - Al Hibner of Color Penfield Green made a [series of videos about installing a geothermal HVAC system at his home](#).
- Sharing on social media
- Writing about your experience in a local publication (printed and/or online)
- Making a map (printed and/or online) with markers for heat pumps/electric buildings and sharing
- Encouraging friendly competition (between individuals and/or communities) to go all electric