

SUMMARY

Neighborhood-Scale Building Decarbonization

A Toolkit for Advocates and Implementers

Climate &
Community
INSTITUTE

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Introduction

Today, the dominant approach to decarbonizing homes is for individual building owners to switch to electric appliances and, in some cases, install solar. In this model, wealthier homeowners will electrify their homes and pull themselves off an aging gas grid, leaving low-income families and renters behind with polluting appliances and high gas bills.

Neighborhood-scale building decarbonization presents an exciting alternative: shifting the unit of building decarbonization from the building to the block, from the individual to the community.

By approaching decarbonization at the scale of a block or a neighborhood, all residents in the chosen geography benefit and per-home project costs can decrease through economies of scale. Importantly, it also helps ensure that lower-income households are not stuck on aging gas infrastructure and instead allows for a more managed gas transition.

In ideal application, it also approaches building decarbonization more holistically than simply installing electric appliances by addressing environmental toxins, improving energy efficiency, and installing solar and battery storage. This approach lowers utility bills and creates healthy homes for all residents, regardless of whether they are rich or own their home.

High-road implementation

To achieve high-road implementation of neighborhood-scale decarbonization, we outline four key principles:

- 1. Prioritize communities being left behind in the energy transition:** There are significant inequities in rates of building electrification across lines of race and class, with white people and homeowners purchasing heat pumps at higher rates than renters and people of color.¹ Neighborhood-scale decarbonization presents the opportunity to bring together neighbors across lines of race and class.
- 2. Center community needs and leadership:** Priorities and needs will differ across neighborhoods and can only be determined through direct engagement. That being said, many community members will be most concerned about the financial and housing impacts of the project. Neighborhood-scale projects should integrate strong tenant protections, avoid upfront costs for participants, and ensure that utility bills do not increase as a result of electrification.² Including community members in project design and implementation will ensure that these provisions, and more, are included in the program.
- 3. Support energy democracy:** Who has control over our energy systems has significant implications for the health of the planet and communities. Neighborhood-scale projects should benefit the surrounding communities, and, where feasible, be publicly or community-owned.
- 4. Create good jobs:** The scale of neighborhood-scale building decarbonization makes it particularly amenable to union contractors or project labor agreements, as compared to going building-by-building. Furthermore, hiring contractors that employ local workers and putting project resources toward supporting workforce development can support the local community.

Site selection approaches

Broadly, there are three approaches to site selection for neighborhood-scale building decarbonization: starting with a specific anchor tenant and location in mind, allowing community members or blocks to self-nominate, or choosing sites based on the feasibility of decommissioning the gas line. These approaches have different benefits and drawbacks, outlined below:

¹ Morgan R. Edwards et al., "Assessing Inequities in Electrification via Heat Pumps across the US," *Joule* 8, no. 12 (August 20, 2025): 3290–3302, <https://doi.org/10.1016/j.joule.2024.09.012>.

² Ruthy Gourevitch, "Tenant Protections for Climate Justice," Climate and Community Institute and Sierra Club, October 2024, https://climateandcommunity.org/wp-content/uploads/2024/10/CCISierra_TenantProtections_final.pdf

Approach	Benefits	Drawbacks
Anchor tenant	<p>Easier to secure the needed buy-in for project success because of fewer building owners.</p> <p>Possible to leverage existing relationships to secure this buy-in on the front end.</p> <p>Staff may have technical or financial knowledge applicable to the project.</p>	<p>Potentially less of an opportunity for community organizing, unless it is a school or other community center.</p> <p>If the anchor tenant backs out, the project fizzles.</p>
Self-nomination	<p>Encourages resident engagement.</p> <p>Ensures some baseline level of community buy-in from the outset.</p>	<p>Sites with capacity and interest in applying may skew wealthier and whiter.</p> <p>Requires capacity to solicit and process nominations.</p>
Gas line decommissioning	<p>Potential to access utility funding through avoided gas line expenditures.</p> <p>Supports shrinking the gas system and decreasing customer costs.</p>	<p>Limits the number of possible sites.</p> <p>Sites may not be the places where there are high baseline levels of support.</p> <p>Reliant on utility support and this support will come with conditions.</p>

Phases

Neighborhood-scale projects can be thought of in four phases: laying the groundwork, organizing and design, implementation, and learning and evaluation.

1	2	3	4
Laying the groundwork	Organizing and design	Implementation	Learning and evaluation
Initial scoping and feasibility assessment	Deeper outreach to residents and decision makers	Confirm financing and fundraising stack	Training on how to use and maintain new appliances
Team and relationship building	Confirm lead implementer	Bidding and contractor selection	Monitoring impacts on utility bills and tenants
Site selection	Complete in-home energy assessments	Continued community engagement	Reflection with stakeholders on project and communication of key takeaways
Initial community engagement	Confirm project scope and budget	Phased implementation	

Investor-owned utility interests

The interests and politics of utilities will shape your project and will vary significantly depending on location and utility structure. In some parts of the country, gas and electricity is provided by publicly or community-owned utilities, while in others, this energy is provided by investor-owned utilities. These utilities are profit-driven, meaning that their support or opposition to neighborhood-scale projects will be largely shaped by the impacts of these projects on their bottom line.

	Support	Possibly support	Oppose
ELECTRIC	New customers, increased load.	Electric networks.	Thermal energy networks, community-owned and -operated systems.
GAS	Status quo, including large capital projects.	Thermal energy networks.	Electric networks or community-owned systems, other projects that decrease the number of gas system customers, regulations that limit gas infrastructure.
GAS AND ELECTRIC	Projects that decrease overall system costs.	Electric and thermal energy networks.	Projects that require significant coordination between gas and electric sides of utility, community-owned and -operated systems.

Additional resources

[Toolkit: How to Develop a Thermal Energy Network](#)

[Neighborhood Scale: The Future of Building Decarbonization](#)

[Thermal Energy Networks in the United States: Emerging Opportunities, Challenges, and Needs](#)

[Thermal Energy Networks: Considerations from Environmental Justice and Energy Democracy Perspectives](#)

[The State of State Climate Action: Updated Scorecards Tracking Progress to 2030](#)

[Building an Equitable, Diverse, & Unionized Clean Energy Economy](#)