Equitable Neighborhood Decarbonization Gets the Go-Ahead

A new California law will allow utilities to replace aging gas infrastructure with zero-emission alternatives in 30 pilot projects

by Elizabeth Waters

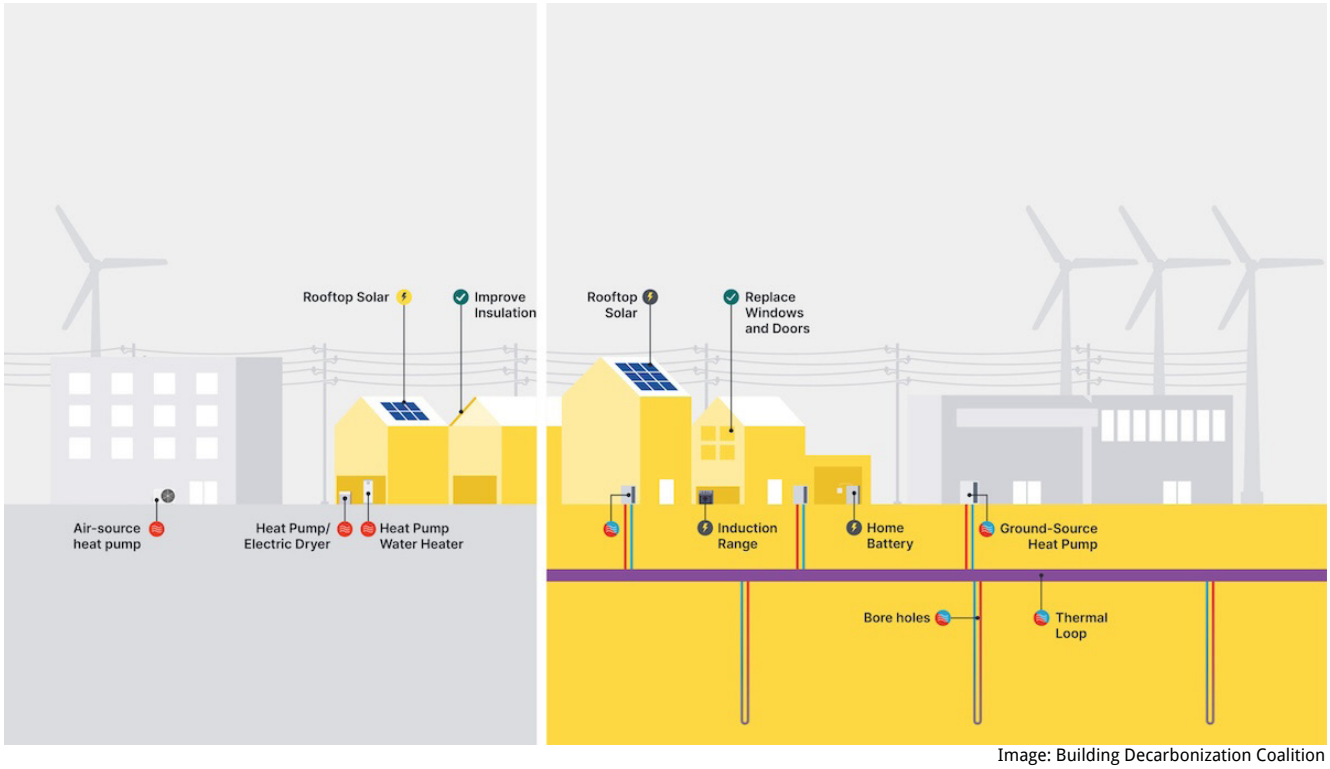

Image: Building Decarbonization Coalition

Neighborhood-scale decarbonization—which can be achieved by developing electric or thermal energy networks—coordinates decarbonization by town, neighborhood, or block.

The clean energy transition is upon us. But if we're not proactive about making it equitable, many people—especially renters along with homeowners in disadvantaged communities—could be left behind paying ever-increasing gas prices.

With its newly passed Neighborhood Decarbonization Act (SB 1221), California seeks to demonstrate—through 30 neighborhood-scale decarbonization pilot projects—how such proactive management might work. The law—sponsored by the Building Decarbonization Coalition, Earthjustice, and the National Resource Defense Council (NRDC)—will allow the California Public Utilities Commission (CPUC) to redirect spending intended for gas-line replacement projects to more cost-effective, zero-emission infrastructure projects.

With the passage of this law, California will be the first state to authorize neighborhood-scale electrification in all investor-owned gas utility territories, according to the NRDC. Typically, gas utilities are legally obligated to provide gas service to their customers. But un-

der the new law, utilities will be allowed to sidestep this obligation if the CPUC deems their zero-emission alternative to be an adequate and available energy substitution.

The pilot projects will provide tenant protections and prioritize benefits to disadvantaged or low-income communities, which the law defines as follows:

- Disadvantaged community: a community identified "based on geographic, socioeconomic, public health, and environmental hazard criteria," pursuant to Section 39711 of the California Health and Safety Code.
- Low-income: a household with income no greater than 80% of area median income or that qualifies for participation in the California Alternate Rates for Energy (CARE) program or Family Electric Rate Assistance (FERA) program.

Investing in new gas infrastructure doesn't make sense

Gas utilities recoup the cost of new gas infrastructure by passing it along to customers, sometimes across a period of up to 80 years, explains the NRDC. This means that, as we transition away from gas to a net-zero-emission economy, gas utilities could be left with gas infrastructure for which the returns are never fully realized. Such unrealized gains are referred to as *stranded assets*.

Furthermore, as increasing numbers of gas customers switch to electric appliances, gas utilities will spread their costs across fewer and fewer households. Those who are unable to electrify will be stuck with steadily mounting gas bills.

Despite this, NRDC writes, utilities across the country are continuing to invest in new gas infrastructure. According to the website of California state senator Dave Min, who authored SB 1221, California utilities replace miles and miles of gas pipelines every year, which, at a cost of more than $3 million per mile, amounts to hundreds of millions of dollars annually.

In contrast, investment in clean energy infrastructure could save the state's gas utility customers $20 billion in avoided pipeline costs by 2045, Energy and Environmental Economics (E3) predicts in an analysis for the NRDC.

What is neighborhood-scale decarbonization?

Neighborhood-scale decarbonization is a strategy that coordinates decarbonization by town, neighborhood, or block. It's an example of a *managed transition*, meaning an intentional effort to simultaneously scale both decarbonization and social equity. An *unmanaged transition*, on the other hand, follows the business-as-usual market approach, with current inequities getting replicated or even amplified by decarbonization efforts. An example of this, according to the Building Decarbonization Coalition (BDC), is the current practice of electrifying homes "appliance-by-appliance" or "house-by-house." BDC writes that an unmanaged transition won't suffice because it is not scalable, doesn't offer a clear path forward for utilities, and perpetuates inequity by leaving out those who cannot afford to electrify their appliances or make the decision to do so—thus sticking them with higher and higher gas bills.

Neighborhood-scale decarbonization addresses these issues, writes BDC, by centering communities in decision-making and by investing in utility-scale infrastructure, which it says will improve the economies of scale of projects and provide ongoing business and job opportunities for utilities and their employees.

BDC explains that there are two pathways to neighborhood-scale decarbonization: the electric network and the

thermal energy network. The electric network connects electric appliances (such as electric heat pumps) to the existing electric grid, while thermal energy networks—of which there are many configurations, including district energy systems and networked geothermal—distribute thermal energy throughout neighborhoods using water- or other liquid-filled pipes. Within thermal energy networks, buildings use ground-source heat pumps to connect to pipelines for space heating and cooling, water heating, and clothes drying.

Because electric heat pumps provide cooling in addition to heating, they are considered a life-saving measure for people who don't have air conditioning in places experiencing deadly heat waves—like California. As such, the Neighborhood Decarbonization Act complements California's goal to install six million heat pumps by 2030 and its Equitable Building Decarbonization Program, which offers incentives for low-carbon technologies and provides low- or no-cost retrofits for low- and moderate-income households.

What's the timeline for SB 1221?

By January 2026, The California Public Utilities Commission (CPUC) will designate "priority neighborhood decarbonization zones" across California, within which the 30 pilot projects will take place. The law states that to identify these areas, the CPUC will consider, among other factors:

- the presence of disadvantaged or low-income communities in high-temperature climate zones or low-temperature climate zones that disproportionately lack cooling or heating
- the presence of environmental and social justice communities as defined in the CPUC's Environmental and Social Justice Action Plan
- the concentration of gas distribution line replacement projects identified by gas utilities
- the availability of supportive local government or community partners

By July 2026, the CPUC will establish a program—in consultation with the state's gas utilities—to facilitate the pilot projects. Each project must have approval from at least 67% of affected gas customers. If a project receives approval from 100% of customers, it won't count as one of the 30 pilot projects. All projects must begin before 2030.

Published October 21, 2024