

Equitable Building Decarbonization Options in a Changing Legal Landscape

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ABSTRACT

Housing is a key social determinant of health, and the economic burdens and health consequences associated with indoor air pollution from fossil fuel-fired appliances fall disproportionately on lower income households and households of color.

With the recent Ninth Circuit case *California Restaurant Association v. Berkeley* finding the city's all-electric ordinance preempted under the Energy Policy and Conservation Act (EPCA), there is heightened concern about the impact court rulings could have on state and local building electrification efforts.

This panel presentation and paper will provide an overview for non-lawyers of EPCA statutory preemption and the existing caselaw interpreting EPCA preemption of building codes. It will discuss available legal options for local jurisdictions to electrify building codes. Then it will assess the legal questions involving building decarbonization options beyond building codes, such as building performance standards, regulating air emissions, and directly limiting or reducing gas infrastructure.

The legal landscape is changing rapidly with the potential for significant future legal challenges as governments pursue additional building decarbonization efforts. As jurisdictions consider their equitable building decarbonization options, they should be prepared for likely legal challenges from those opposed to transitioning away from health-harming gas appliances.

Introduction

Eliminating the use of fossil fuels in the United States' buildings is an important element of any climate-mitigation strategy, and is particularly important for reducing the inequitable exposure of communities of color and low-income communities to air pollution. Federal building-decarbonization policy, outside of subsidies, leaves state and local government to fill in the gap. However, litigation under the Energy Policy and Conservation Act (EPCA) has led to a federal appeals court striking down one municipal ordinance aimed at complete building decarbonization, raising concerns about federal preemption of state and local climate action (*California Restaurant Association v. City of Berkeley* 2024).

This paper aims to clarify the state of subnational authority to promote building electrification and efficiency measures. We begin with an explanation of the *California Restaurant Association v. City of Berkeley* case, including both its impacts and limitations. We then dedicate the bulk of the paper to highlighting and discussing several options that state and local governments have for moving forward on building decarbonization: building performance standards, emissions standards, regulation of gas distribution, zoning, and subsidies and incentives. This list is by no means exhaustive—many other options are available to states and cities—but it reflects some of the most prominent and policies in the current discussion.

Federal Preemption of State and Local Building-Decarbonization Regulations

The Energy Policy and Conservation Act and *California Restaurant Association v. Berkeley*

The federal Energy Policy and Conservation Act (EPCA) creates energy-efficiency standards for certain appliances (EPCA § § 6291-6317). It also preempts—that is, makes ineffective—state and local regulations “concerning the energy efficiency, energy use, or water use of [an EPCA-]covered product” (EPCA § 6297). (Importantly, EPCA exempts many regulations from this preemption, including regulations included in certain types of “building codes for new construction.”) Until recently, this had been understood to preempt state and local energy-efficiency standards; for example, one appeals-court case said that EPCA “preempts state standards requiring greater efficiency than the federal standards” (*Building Industries Association of Washington v. Washington State Building Code Council* 2012).

However, the judges in a more recent federal case, *California Restaurant Association v. Berkeley* (*Berkeley*), interpreted the preemption provisions in EPCA much more broadly. *Berkeley* was an industry challenge to a municipal ordinance adopted in 2019, which prohibited the inclusion of gas infrastructure in new buildings. The industry plaintiff argued that, since some EPCA-covered appliances use gas, and eliminating gas from a building would prevent those appliances from being used there, the ordinance “concern[ed] the...energy use” of EPCA-covered appliances. The defendants and supporters argued, among other points, that such a broad interpretation of EPCA would eliminate the traditional state and local role in the regulation of utility distribution.

The judges’ reasoning can be understood as proceeding in three steps. First, they agreed with the industry group that EPCA would preempt a regulation that entirely prohibited the use of an EPCA-covered appliance, because such a prohibition would reduce the “energy use” of the appliance to zero, therefore “concerning” the appliance’s “energy use.” Second, the judges argued that some regulations that have the effect of eliminating the use of EPCA-covered appliances, but do not explicitly prohibit those appliances, may also be preempted. Third, they determined that the particular ordinance in the *Berkeley* case was within the scope of preemption, noting in particular EPCA’s exception for certain types of “building codes for new construction,” which implied that EPCA was intended to apply to regulations like the ordinance.¹

The judges also rejected the argument that their interpretation infringes on local control of utility distribution. They defined gas distribution as ending at the point that gas is delivered to the meter, and, since the ordinance only affected infrastructure on the building side of the meter, decided that gas distribution would not be affected. They specifically noted that they were not addressing state or local authority to regulate gas distribution on the utility side of the meter; that is to say, the bulk of gas-distribution infrastructure.

Finally, *Berkeley*’s most recent developments point to a high level of disagreement with the case interpretation, even among other judges of the same appeals court. The case was heard by a three-judge panel. The city asked the court to convene a larger panel to review the original panel’s decision, a level of review which is very rarely granted and was, in fact, denied in this

¹ The judges did not make clear why they considered the ordinance to be a “building code for new construction,” since it was not actually incorporated into state building codes and did not amend the state codes. Presumably, the fact that the ordinance applied only to new construction and addressed a building system made it similar enough to a building code that the judges did not care to draw the distinction.

case. However, eight judges, supported by three additional judges, filed a dissent to that denial, laying out a more traditional and limited understanding of EPCA preemption and “urg[ing] any future court that interprets [EPCA] not to repeat the panel opinion’s mistakes” (*Berkeley*, 89 F.4th at 1119). While no court is required to follow the dissent’s reasoning, its force and the number of judges that agreed with it may be persuasive to judges in other cases.

Implications of the *Berkeley* Case for State and Local Building-Decarbonization Authority

Although EPCA is a federal law, the *Berkeley* case applies only in the states and territories in the jurisdiction of the Ninth Circuit Court of Appeals, namely: Alaska, Arizona, California, Guam, Hawai‘i, Idaho, Montana, Nevada, the Northern Marianas, Oregon, and Washington (collectively, the “Ninth Circuit”). This means that, unless other courts adopt the *Berkeley* reasoning, state and local governments outside of the Ninth Circuit are still able to pass and implement legislation identical to the ordinance struck down in *Berkeley*.

Currently, there are at least two lawsuits pending that are attempting to copy the *Berkeley* litigation, both in New York (*Mulhern Gas Co. v. Rodriguez* 2023; *Association of Contracting Plumbers v. City of New York* 2023). If they are appealed to the Second Circuit Court of Appeals, which has jurisdiction over federal cases in New York, it is possible that the Second Circuit would reach a different conclusion than the Ninth Circuit, creating what is called a “circuit split.” This would greatly increase the chances of the U.S. Supreme Court taking the case and issuing an opinion that would apply nationwide. Until then, however, the viability of the particular type of regulation at issue in the *Berkeley* case will depend on whether or not the city or state is located in the Ninth Circuit.

There is also some ambiguity about the extent to which the *Berkeley* opinion will affect other kinds of regulation. The ordinance in *Berkeley* effectively prevented any use of gas appliances in non-exempt buildings, resembled a “building code for new construction,” and affected infrastructure on the building side of the meter. The judges in *Berkeley* emphasized that each of these factors was important in their decision, and that their opinion was not meant to address any other kind of regulations. Therefore, we expect other courts in the Ninth Circuit, or courts outside the Ninth Circuit that decide to follow the *Berkeley* decision, to consider those three factors in determining whether other types of regulation are preempted; this informs the following analysis.

Legal Pathways for Building Decarbonization

The remainder of this paper discusses specific types of building-decarbonization regulation. Throughout, we give consideration to the three elements of the *Berkeley* decision discussed above: complete prohibition on gas use, similarity to new-construction building codes, and applicability to the building side of the meter. However, it is important to bear in mind that, as of now, the *Berkeley* decision does not apply outside of the Ninth Circuit states and territories; governments outside of the Ninth Circuit are still able to implement regulations identical to the ordinance struck down in *Berkeley*.

Building Performance Standards

As of March 2024, four states and nine localities have adopted building performance standards (BPS). Those 13 jurisdictions and more than thirty others have joined President

Biden’s National Building Performance Standard Coalition to commit to adopting equitable BPS and sharing best practices in a community of practice, as depicted in Figure 1, below.



Figure 1. States, counties, and cities in the National Building Performance Standard Coalition. *Source:* National Building Performance Standard Coalition, 2024.

A building performance standard is a policy that sets specific deadlines for existing public and private buildings to achieve quantified standards of performance. BPS apply to buildings at or above a size threshold; the 13 adopted BPS have minimum thresholds of 10,000-50,000 square feet of gross floor area.

BPS can regulate many performance metrics, including water use or ventilation. To date, all 13 adopted BPS regulate only energy intensity and/or emissions intensity. BPS become more ambitious over time at a cadence set in law, driving continuous, long-term improvement in the building stock. BPS requirements apply at a set schedule and require no trigger. In this way BPS are different from, and complementary to, building energy codes, which are triggered by a construction or renovation permit application (Institute for Market Transformation 2024).

BPS typically apply to almost all large buildings and not just to the 1-2% of the building stock typically constructed each year. So, BPS can quickly drive change to the built environment. In fact, BPS are the most powerful policy tool for driving such change, especially when paired with technical, practical, and financial help to building owners, operators, and occupants. Because of the great power of BPS, such assistance, tenant protections, and other safeguards must be employed to assure that the process of designing and implementing BPS is equitable and inclusive and to guard against unintended consequences including tenant displacement.

To date, building decarbonization is a central goal of every BPS adoption. The most common BPS performance metric is site energy use intensity (site EUI). Building owners can

lower site EUI in many ways. The least expensive options are operational changes including retuning, shutting down lights and systems serving unoccupied spaces, optimizing HVAC routines, and improved maintenance. These changes improve efficiency and reduce GHG emissions, but rarely completely eliminate onsite emissions. The other main way to lower site EUI are capital improvements, including replacing lighting, building envelope, water heaters, and HVAC equipment. Replacing combustion equipment with heat pumps is typically the single measure that most lowers site EUI. So, BPS that require very low EUIs will induce most building owners to replace all frequently-used combustion appliances with heat pumps.

Maryland's proposed BPS rules go a step farther. They have two performance metrics. They use site EUI and the trajectory approach to assure energy efficiency and deter installation of inefficient electric resistance heat. And, to further assure decarbonization, they require that onsite and district thermal GHG emissions be lowered in five-year intervals at 2030, 2035, and ending at zero in 2040. Owners have the option to make alternative compliance payments set at the social cost of carbon instead of achieving GHG targets (Maryland Department of Environment 2024).

The IMT model BPS law, first published in 2021, serves as the starting point for most new BPS bills. It includes five performance metrics: site EUI, onsite and district thermal greenhouse gas emissions, coincident peak demand, water usage intensity, and indoor air quality. It also introduced the trajectory approach, a method to set each building's BPS targets so as to equitably distribute the level of effort across building owners while providing long-term certainty. Like many adopted BPS, it features flexibility mechanisms, including giving owners the option to propose alternative compliance plans or to pay a fee in lieu of achieving performance targets (Institute for Market Transformation 2021).

Building performance standards and EPCA. Since building performance standards are not building codes, they may also be insulated from the effects of the Berkeley decision. However, there are at least two potential areas of concern here: First, some building performance standards that are based on emissions will eventually reduce the permissible amount of greenhouse-gas emissions in covered buildings to zero. In the absence of flexibility mechanisms, this could be interpreted as effectively prohibiting the use of on-site fossil-fuel appliances, which could fall afoul of Berkeley's logic, if not its direct holding. It is not certain that a reviewing court would extend the logic of Berkeley's logic in this way, particularly given the opinion's insistence that its "holding...is limited" and applies only to "building codes that regulate the gas usage of covered appliances on premises where gas is otherwise available." Flexibility mechanisms, such as the ability to pay a fee in lieu of reducing emissions, or the ability to use off-site renewable energy, may also protect such regulations.

For instance, Boston enacted a policy requiring buildings over 20,000 square feet to meet emissions targets starting in 2025 with the final target of carbon neutrality by 2050. Alternative compliance options include the offsite purchase of renewable energy or paying an alternative compliance payment per metric ton of carbon dioxide equivalent in excess of the building's target. The availability of these alternative compliance pathways and a net zero target that does not necessarily require the elimination of natural gas reduces the legal risk posed by Berkeley because Boston is not actually or effectively preventing consumers from using covered products under EPCA. Rather, building owners retain a range of options for achieving compliance with the city's building performance standard.

Building performance standards that only regulate buildings' energy use (e.g. site EUI) rather than their emissions are unlikely to force a building to stop using fossil-fuel appliances,

both because they are fuel-neutral and because they do not require a building to completely eliminate energy use, the way that emissions-based building performance standards may require complete elimination of emissions. These standards are therefore more likely to be protected from the effects of *Berkeley*.

Building Energy Codes for New Construction

Building codes for new construction are a key policy lever for building decarbonization, because electrification and efficiency measures are usually much less expensive and easier to perform than retrofits of an existing building. Building codes are typically passed by state governments and are generally based on “parent codes” created by nonprofit institutions. For energy codes—building codes that specifically address a building’s energy usage—the primary parent codes are the International Energy Conservation Code, published by the International Code Council, and ASHRAE’s Standard 90.1. Most states adopt these codes with amendments to conform to their particular needs or policy preferences, some states allow their local governments to adopt additional amendments, and some states have no statewide code and leave all responsibility for building codes to local governments.

In the Ninth Circuit, energy-code provisions that apply to new construction and that entirely prevent builders from using gas in their home are at risk for preemption under *Berkeley*. However, there are many options for energy codes that do not go as far as that. In fact, EPCA includes a specific exception for certain types of flexible codes, meaning that codes that conform to those requirements are immune from EPCA preemption, even in the Ninth Circuit.

To benefit from this exception, an energy code must meet all of the following requirements (EPCA § 6297(f)):

1. The code must set an ends-oriented standard that allows the builder to select measures to meet a specified energy goal.
2. The code cannot set mandatory standards for a specific EPCA-covered appliance that is more stringent than EPCA standards require.
3. The code can award builders credit for using appliances that are more efficient than EPCA standards require, which can be used to reduce the energy standards in other areas of the code, but those credits must provide for reductions on a one-for-one basis, based either on cost or energy savings.
4. If the code uses baseline designs, against which other designs would be compared, the baseline design cannot include appliances that are more efficient than EPCA standards require.
5. If the code is designed as a selection from different bundles of energy requirements, at least one of those bundles must be designed so that EPCA-covered appliances do not need to beat the EPCA standards. In addition, if there are any bundles that require EPCA-covered appliances to be more than 5% more efficient than EPCA standards require, there must be an equal number that are within 5% of the EPCA standards.
6. The goal that the energy code sets for energy efficiency must be described in terms of energy consumption or cost.
7. Finally, the code must use the same energy-efficiency testing procedures as EPCA regulations use.

Taken together, these requirements allow for a variety of flexible energy efficiency codes, under which builders can either use highly efficient appliances, such as heat pumps, or achieve equivalent efficiency through other means, such as by tightening the building insulation. Energy codes can also include provisions that promote electrification without prohibiting the use of gas appliances, such as “electric-ready” provisions that require homes to include the electrical infrastructure necessary for electric appliances, even if they use gas appliances. This is the approach taken by Washington’s most recent commercial code, for example (2021 Washington State Energy Code—Commercial, 2024).

Two federal cases have interpreted this flexibility requirement. In *Air Conditioning, Heating and Refrigeration Inst. v. City of Albuquerque (Albuquerque)* (2008; 2012), a trial-level court evaluated various code approaches for consistency with the EPCA exception. In a preliminary ruling, the court found that a code that allowed for flexibility on paper, but whose alternative options were practically impossible, would not qualify for the exception (2008). The judge in *Albuquerque* also suggested that a credit system that requires builders to either include appliances that are more efficient than EPCA requires, or to take on other energy-efficiency measures, could be considered a penalty for using EPCA-compliant appliances that would disqualify the code from the EPCA exception (2008). However, this initial ruling was never finalized; the court instead struck down the code on other grounds (2012).

The second case, *Building Industry Association of Washington v. Washington State Buildings Code Council (Washington)* (2012), was ultimately decided at the Ninth Circuit Court of Appeals. That opinion determined that the EPCA exception allowed for a code to require builders to either use appliances more efficient than EPCA required, or to take on other, more costly efficiency measures. The opinion also determined that, although the EPCA exception requires efficiency credits to be provided on a one-to-one basis, “some approximation” was permissible in assigning credits (683 F.3d at 1146). Because the *Washington* opinion came from an appeals court and the *Albuquerque* opinion came from a trial-level court, and because the relevant portions of the *Albuquerque* came from an initial ruling, the *Washington* approach to the EPCA exception must be followed within the Ninth Circuit, and is more likely to be followed outside of it. Therefore, a flexible code that allows some option for builders to avoid using appliances that are more efficient than EPCA requires, even if those options are more expensive, can still qualify for the EPCA exception.

Emission Standards

State or local governments have also considered applying restrictions on the amount of pollutants that an appliance, building, or fuel can emit. This type of regulation is conceptually different from regulation of appliance efficiency: Air pollution is regulated at the federal level by the Clean Air Act, not EPCA, and is frequently motivated by public-health concerns, not by a need to conserve energy.

Within the Ninth Circuit, emission standards that completely eliminate certain types of fuel—for example, because it is technologically impossible to combust that fuel without emitting more than the permitted amount of pollutant—have an uncertain status. Such standards are not necessarily “building codes for new construction,” although when they only apply to new buildings, they may be treated as such. They could be thought of as applying to the building side of the meter, since they generally address the point of fuel combustion, but they could also be thought of as applying to the point where the fuel achieves its final chemical composition, or to a point outside the energy system altogether. Finally, as addressed below, they may be fully

incorporated into the Clean Air Act's regulatory structure, implying that they should not be subject to EPCA preemption at all.

Fuel emission standards. Some cities have prohibited the combustion of any fuel that emits more than a specified level of pollutant. For example, New York City has prohibited “the combustion of any substance that emits 25 kilograms or more of carbon dioxide per million British thermal units of energy” in new buildings, with some exceptions (N.Y.C. Admin. Code § 24-177.1). Chicago's Clean and Affordable Buildings Ordinance, introduced in the beginning of this year, would do essentially the same (2024). Since, under currently available technology, all fossil fuels emit more carbon dioxide per unit of energy than permitted by these ordinances, they effectively prevent the combustion of fossil fuel in new buildings (Energy Information Administration 2022).

As noted above, the effect of effectively preventing fossil fuels from being used in new buildings on the logic of the *Berkeley* opinion is unclear: These prohibitions are not explicitly building codes, but they do apply to new construction; they are stylized as emission regulations, but they have a similar effect to fuel prohibitions. It may also be relevant that air regulation is an area of law separate from energy codes, so that courts may think of these regulations as more removed from EPCA's ordinary scope than the *Berkeley* ordinance. New York City's ordinance was challenged under the same theory as the *Berkeley* opinion, and so we are likely to get an answer from one lower court soon (*Association of Contracting Plumbers v. City of New York* 2023).

Appliance standards. Many state and local regulations set limits on the amount of pollutants an appliance can emit. These are typically in service to clean-air standards set by state governments or under the federal Clean Air Act. Although they may have the effect of requiring EPCA-covered appliances to run more efficiently, to the authors' knowledge they have never been subject to an EPCA preemption challenge.

Among these appliance standards, there is a growing movement to adopt “zero emission” standards, which would require appliances to completely eliminate the emission of certain pollutants of concern, primarily nitrogen oxides (NO_x). For example, the Bay Area Air Quality Management District (BAAQMD), a regional air-quality regulator in California, recently enacted rules that will eventually require certain heating appliances in the area to have zero NO_x emissions (BAAQMD 2023). These zero-NO_x standards are particularly important in California, where smog levels (formed in part by NO_x) have persistently exceeded federal standards (e.g., EPA 2023).

Under currently available technology, these zero-emission standards effectively prevent appliances from combusting any type of fossil fuel. Because BAAQMD is located in the Ninth Circuit, the *Berkeley* opinion has immediately raised questions about its future, and that of other planned rules in California. However, the rules could be incorporated into the regulatory structure of the federal Clean Air Act, which would likely protect them from preemption under EPCA.

The Clean Air Act functions, in part, by requiring states to come up with their own paths to comply with federal air-pollution standards, which they bundle into “state implementation plans” (SIPs) (Clean Air Act §§ 7407, 7410). These SIPs can include state or local laws, regulations, or policies. The SIPs are then subject to review and approval by the U.S. Environmental Protection Agency (EPA) (Clean Air Act § 7410).

Importantly, once a SIP is approved, federal appellate courts agree that its provisions gain “the force and effect of federal law” (e.g., *Safe Air for Everyone v. EPA* 2007; *Sierra Club v. EPA* 2007; *Union Electric Company v. EPA* 1975). If the regulations are federal in nature, they are likely not subject to preemption, since preemption applies only to state and local laws. Instead, a court that believed that a SIP provision conflicted with EPCA’s preemption provision would likely be obligated to “harmonize” the two, a process which would provide much more protection to the SIP provisions than is afforded to state and local regulations. This is still somewhat theoretical, although one Ninth Circuit opinion agrees with it in the context of federal railway preemption: “[T]o the extent that state and local agencies promulgate EPA-approved statewide plans under federal environmental laws..., [federal railway law] generally does not preempt those regulations because it is possible to harmonize [federal railway law] with those federally recognized regulations” (*Ass’n of Am. Rrs. v. S. Coast Air Qual. Mgmt. Dist.* 2010, 622 F.3d at 1098).

Limitations on Gas Distribution

As noted above, state and local governments have traditionally been the primary regulators of gas distribution. This regulatory role includes deciding where gas-distribution networks can be placed in the first place. Historically, these decisions have been made based on the need for gas in an area and the cost of building and maintaining the necessary infrastructure. Recently, however, states and localities have been examining the possibility of using this role in order to encourage or mandate the removal of gas from use in an area altogether.

This policy pathway may be particularly attractive in the Ninth Circuit. The *Berkeley* opinion strongly implies that the regulation of gas-distribution networks is not preempted by EPCA, even if it leads to gas becoming unavailable to a building. Such regulations are also clearly not “building codes for new construction,” and can be designed to avoid regulating gas infrastructure on the building side of the meter.

State and local restrictions on gas distribution. State and local governments typically exercise differing levels of authority over gas distribution. States typically assign gas utilities “service areas,” which are the regions in which the gas utility both can and, to an extent, is required to provide service (Wallace et al. 2020, 10, 24-25). States also exercise a high level of regulatory authority over the business decisions of gas utilities, especially privately owned ones. In particular, states generally determine when a utility can be allowed to raise prices in order to recover the cost of expanding or maintaining its infrastructure. In this way, they can exert a high level of control over a utility’s business decisions.²

Local authority, on the other hand, is typically rooted in the control the local government has over public land and rights-of-way. (Some local governments also have their own, public gas utilities; these can be more directly controlled.) Gas utilities almost always need to install physical infrastructure, such as mains and service lines, on public land. To do so, they typically enter into a “franchise” or “license” agreement with the governmental entity that controls that land, buying the right to use the land for a fee. These franchise agreements could limit the areas where the gas utility is allowed to use the land for their infrastructure, thus effectively preventing

² For one example of a state regulatory body exerting that control, see the recent “Future of Gas” decision from the Massachusetts Department of Public Utilities (2023).

areas from receiving gas service. Even outside of the franchise structure, local governments could refuse access to gas infrastructure for certain areas.

Neighborhood-scale electrification. A related strategy is to fully transition all the buildings in an area to electricity, then remove the gas infrastructure in that area. If the area is strategically selected with regard to the maintenance needs of the gas infrastructure and the ability to easily remove that section of infrastructure from the distribution network, then this approach can result in substantial cost savings to the gas utility. This strategy, called “neighborhood-scale electrification” or “tactical decommissioning,” both protects residents from the harms of gas combustion and reduces costs for people who continue using gas (e.g., Gridworks n.d.).

This approach could be pursued alongside other strategies to reduce the service or franchise area of a gas utility, in order to lock in decarbonization while also achieving cost savings. It is considered particularly important as a long-term strategy to avoid an inequitable gas “death spiral,” where a large number of customers stop using gas without substantially reducing the fixed costs of gas infrastructure, leaving the remaining customers paying a high per-unit rate for gas, which then incentivizes more customers to stop using gas (e.g., Gridworks 2019, at 4-5). The theoretical end point of this “death spiral” is when only customers that have no ability to electrify because they rent their home and do not have the right to decide what appliances they use, or because they cannot afford to purchase new appliances—which has the potential to be highly inequitable.

Subsidies and Incentives

Finally, state and local governments may encourage building electrification and efficiency through subsidies and incentives. Because they work on a voluntary basis, subsidies and incentives are free of many of the restrictions that inhibit other policy pathways. In particular, the *Berkeley* opinion almost certainly does not restrict a government from securing voluntary decarbonization through subsidies and incentives, because they are not a prohibition on appliance use, not a building code, and don’t directly affect any part of fuel-distribution infrastructure.

The possible subsidies are too many and varied to list here. Some governments provide direct installation of electric appliances to replace gas appliances (e.g., California Energy Commission n.d.). Where local governments run publicly owned utilities, they may provide rebates through the utility for the installation of efficient electric appliances (e.g., Sacramento Municipal Utility District n.d.). Governments may also charge fees as part of a building-decarbonization program and direct those fees to subsidize decarbonization measures for low-income households (e.g., City of Boston Code of Ordinances 2022 § 7-2-2(g)).

Though less commonly discussed, zoning codes are another regulatory method for local governments to encourage or even require electrification. Many local governments have broad authority to pass zoning codes. One common way in which local governments use that authority is to relax zoning and design requirements for buildings if they meet other policy goals of the local government. One example of this approach is the town of Brookline, Massachusetts, which created a special zoning district in which only buildings that met certain green-building certifications were eligible for certain variances (Town of Brookline By-Laws 2018, § Z-5.06(4)(j)(3)(d)).

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