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CITIES CLIMATE LAW: A LEGAL FRAMEWORK FOR LOCAL ACTION IN THE U.S.

By Amy E. Turner and Michael Burger
November 2021

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How can U.S. cities enact ambitious carbon mitigation policies that comply with federal and state law?

In the last several years, cities around the world have taken on a leading role in advancing policy to reduce greenhouse gas emissions. In the United States, dozens of cities have set goals targeting ambitious greenhouse gas emission reductions by a date certain (80% or “net zero” by 2050 are common formulations), and many more have pledged to achieve a 100% renewable or carbon-free energy supply.

Many U.S. cities are still determining the policies that would best achieve their climate commitments. In addition to political, financial, and technical considerations, these cities must consider how to structure their policies to comport with federal and state law. Given variable conditions and contexts, cities can’t simply “copy and paste” climate policies that have been successful elsewhere. They must consider the contours of their own legally delegated authority.

Cities Climate Law: A Legal Framework for Local Action in the U.S. explores and explicates legal issues that might inhibit or enable policy adoption and implementation across a range of municipal carbon mitigation policy areas: Equity, Buildings, Transportation, Energy, and Waste. The report demystifies these sometimes knotty legal questions so that law- and policy-makers can craft informed, creative carbon mitigation policies that address local political and policy concerns while staying within legal bounds, reducing the risk that action will be undone by the courts.

U.S. cities are central to national efforts to reduce greenhouse gas emissions and help stave off the most dire impacts of climate change. And our cities have long pioneered pathbreaking carbon mitigation law and policy, and will continue to do so. While federal and state law pose distinctive legal challenges, they also provide unique opportunities for enterprising cities to continue to lead the way in reducing greenhouse gas emissions.

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GLOSSARY

This guide refers to certain terms interchangeably. While cities are often touted as leaders in mitigating climate change, we recognize that towns, villages, and counties also frequently play this leadership role. What's more, cities, towns, counties, and other municipal forms of government have similar constraints and opportunities available to them.

As a matter of style, we use the words **city, municipality, and locality** interchangeably here to refer to local areas in the U.S. that have an incorporated, sub-state form of government, including, without limitation, cities, towns, counties, and villages.

In addition, the term “greenhouse gas” includes a number of gases in addition to carbon dioxide, the most prevalent greenhouse gas. This guide uses the terms **greenhouse gas**, its abbreviation **GHG**, and **carbon** or **carbon dioxide** interchangeably to refer to all greenhouse gases.

Similarly, we use terms such as **carbon mitigation, decarbonization, and GHG reductions** variably to refer to the reduction of greenhouse gas emissions.

The terms defined below are used throughout this report.

Accessory dwelling unit (ADU): a smaller residential unit located on the same lot as a single-family home.

All-electric construction: a new or renovated building that is fueled by electricity as its sole energy source.

Benchmarking: a policy to measure the energy performance of a building over time and relative to other similar buildings in order to track changes in building energy use and to identify opportunities for energy savings.

BIPOC: Black, indigenous, and people (or person) of color.

Building code: refers broadly to a range of construction requirements that are codified in a building or construction code, an energy or energy conservation code, a plumbing code, or another code – each of which might apply to residential, commercial, or some other subset of buildings – that set standards for building construction or for major renovations.

Building envelope: the physical separation of the interior and exterior of a building.

Clean energy: low-carbon energy sources, including but not limited to renewable energy sources. The definition of “clean energy” is open to debate and for some may include nuclear power.

Climate justice: a framework and a movement that acknowledge that climate change has disproportionate adverse impacts on low-income, BIPOC, and other underprivileged populations and seeks to address these inequities.

Community choice aggregation (CCA): a program that allows an aggregator – often a local government – to arrange for the purchase of electricity in bulk such that residents may purchase the electricity through the program while the traditional utility provider continues to provide distribution and billing services.

Compliance pathway: one of two or more options for compliance with a federal, state, or local law, rule, regulation, or other requirement.

Congestion pricing: a road pricing strategy that sets a higher price for driving on a road or in an area during times with more traffic.

Cordon pricing: a congestion pricing strategy that sets variable or fixed charges to drive into a geographic zone of a city.

De facto mandate: a standard that is structured to appear like an incentive, but that actually compels behavior as a mandate or requirement would. Where federal or state law preempts certain local requirements, a court may hold an apparent incentive preempted by finding it to be a *de facto* mandate.

Demand response: refers to strategies that encourage or incentivize electricity customers to reduce or shift electricity usage during periods of high demand.

Density bonus: a zoning incentive that allows a developer to increase the maximum allowable development or number of units for a parcel of land.

Deregulated (electricity): describes a state jurisdiction in which some loosening of regulation of the electricity system has taken place, notably that the generation and distribution functions of electricity service have been split such that customers may choose a power generator other than the local utility.

Dillon's Rule: the doctrine that a unit of local government has no more power or authority than the authority the state has expressly granted to it, along with any implied powers necessary to carry out a grant of authority from the state government.

Direct current (DC) charger: an electric vehicle charger that uses direct current and can charge a vehicle with at least 60 miles worth of distance per 20 minutes of charging.

Distributed energy generation: the generation of electricity in small quantities at or near where it will be used (e.g., rooftop solar panels).

Dormant Commerce Clause (dCC): an implied, or dormant, aspect of the Commerce Clause (art. I, § 8, cl. 3) of the U.S. Constitution that bars states and local governments from passing laws that discriminate against interstate commerce.

Electric vehicle (EV): a vehicle that is powered by one or more electric motors.

Electric-readiness: a construction standard requiring a building to be wired for an electric furnace, HVAC system, and other appliances, even if fossil-fueled systems or appliances are installed at time of construction.

Electrification (building electrification): switching out fossil-fueled building systems and appliances in favor of electric systems and appliances. Also called “beneficial electrification.”

Embodied carbon: the cumulative GHG emissions attributable to the supply chain, transportation, manufacturing, and end-of-life processing of a building’s construction materials.

Eminent domain: the power of a government to take private property for public use. Per the Fifth Amendment of the U.S. Constitution, a taking by eminent domain requires the government to pay “just compensation” to the property owner.

Energy-aligned lease: a lease that realigns the incentives between landlord and tenant to better catalyze building energy improvements. Also referred to as a “green lease.”

Energy efficiency: a strategy or technology to use less energy to perform the same function.

Energy justice: a framework for understanding the energy system, with “the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those disproportionately harmed by the energy system.”¹

Environmental justice: a framework and a movement that prioritizes the equal development and protection of environmental laws for all people regardless of race or income levels, and that seeks to prevent or redress inequitable disparities in exposure to environmental pollution experienced by BIPOC and low-income populations.² An **environmental justice community** is a neighborhood where environmental and socioeconomic factors contribute to health disparities and other negative outcomes.

Environmental review: the process of identifying and assessing the environmental impacts of a governmental project or action, or of a private party’s project or action that requires a governmental permit or funding, pursuant to federal, state, or local law.

Equal Protection: an individual right under the Fourteenth Amendment of the U.S. Constitution to equal treatment by the government in comparison to the treatment of other persons or classes in similar circumstances.

Federal-aid highway: “a public highway eligible for [federal funding] other than a highway functionally classified as a local road or rural minor collector.”³

Fee: a charge or payment for services.

Franchise agreement: a contract through which a local government offers access to the public right of way for a utility to place pipes, wires, and other infrastructure, often in exchange for a fee.

1 Definition adapted from the Initiative for Energy Justice, <https://iejusa.org>.

2 See, e.g., *Environmental Justice*, U.S. Env’tl Protection Agency at <https://www.epa.gov/environmentaljustice>.

3 23 U.S.C. § 101(a)(6).

Frontline communities: neighborhoods that experience the earliest and worst impacts of climate change.

Fuel economy: “the average number of miles traveled by an automobile for each gallon of gasoline (or equivalent amount of other fuel) used.”⁴

Gentrification: the process by which a neighborhood changes due to an influx of more affluent residents.

Geothermal energy: energy derived from hot water or steam drawn from geothermal reservoirs in the subsurface of the earth.

Green lease: see “Energy-aligned lease,” above.

Green tariff: an electric utility offering or rate that allows customers (sometimes only large customers) to source electricity from renewable energy sources.

Greenhouse gas (GHG): a gas that traps heat in the air, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated gases (hydrofluorocarbons and perfluorocarbons), and sulphur hexafluoride (SF₆).

Grid flexibility: strategies to manage the supply and demand for electricity given the variable nature of many renewable power sources.

Heat pump: a heating and cooling device that can draw heat into a building to heat it or draw heat from a building to cool it. Heat pumps may use a variety of fuels, but in the building decarbonization context are often fueled by electricity or geothermal energy.

Heavy-duty vehicles: vehicles weighing more than an amount defined by the applicable regulator. The U.S. Federal Highway Administration defines heavy-duty vehicles as those greater than 26,000 pounds, while the U.S. Environmental Protection Agency defines them as vehicles greater than 8,500 pounds.

HVAC: heating, ventilation, and air conditioning.

Hybrid vehicle: a vehicle powered by both an internal combustion engine (i.e., gasoline or diesel) and an electric motor.

Independent system operator (ISO): an independent entity that coordinates regional transmission of electricity and ensures the safety and reliability of the electric system within a region.

Investor-owned utility (IOU): a privately-owned electric utility business that is subject to state regulation.

Just compensation: a governmental entity’s payment to a property owner for property it has taken under eminent domain or through a regulatory taking.

⁴ 49 U.S.C. § 32901(a)(11).

Land use: the field relating to planning and regulating the development of real estate.

Low emissions zone (LEZ): a bounded, geographic area in which certain vehicles are restricted or disincentivized from entering otherwise public roads.

Local (or localized) air pollution: air emissions of sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO₂), particulate matter (PM), and other pollutants with significant local impacts.

Market participant exception: the principle that a state or local government does not violate the dormant Commerce Clause by acting as a buyer or seller in the market. With respect to federal statutes such as the Clean Air Act, Energy Policy and Conservation Act, and the Federal Aviation Administration Authorization Act, “market participant exception” refers to an exception from preemption by those statutes where the state or local government acts as a market participant rather than a regulator.

Megawatt (MW): 1,000,000 watts of electricity.

Megawatt-hour (MWh): a unit of energy measuring one MW generated per hour.

Microgrid: a local energy grid that can disconnect from the traditional grid and operate autonomously to provide resiliency in the event of grid disruptions.

Mode shift: a change in form of transportation, as from driving to public transit.

Municipal home rule: a state legislative delegation of autonomy to a local government. Also called “home rule.”

Municipal utility: a utility owned by a unit of local government.

Municipalize/municipalization: the action or process of forming a new public utility, particularly an electricity or energy utility, such that utility assets are owned, and electricity or energy is provided by, a unit of local government.

Natural gas ban: a policy that prohibits or restricts natural gas connections to new buildings.

Net metering: a metering and billing arrangement that allows distributed energy generation system owners (such as building owners with rooftop solar panels) to be compensated for energy they transmit to the electricity grid.

Nondelegation doctrine: the principle limiting the ability of one branch of government, such as a legislative body, to transfer its authority to another governmental branch or to a third party.

Obligation to serve: a state law right of consumers to receive service from a utility upon request. The parameters of an obligation to serve vary with state law. Also called “duty to serve.”

Ordinance: a local law or regulation.

Organic waste: waste derived from living organisms, particularly food waste and yard waste.

PACE (or property assessed clean energy) financing: a financing mechanism by which property owners can pay back loans for energy efficiency and renewable energy projects through a voluntary tax assessment tied to the property rather than the borrower.

“Pay as you throw”: a system of municipal solid waste collection in which residents are charged based on the amount they dispose of.

Penalty: a fine assessed for violating a law or regulation.

Performance requirement or performance pathway: a requirement, or compliance pathway within a requirement, that sets a standard of performance for a building but does not specify the way in which such standard must be met.

Police power: a state’s Tenth Amendment right to enact and enforce laws protecting the public’s health, safety, and general welfare. A state may delegate all or portions of its police power to local governments.

Power purchase agreement (PPA): a contract for energy between an energy project developer and a customer that sets a price for such energy and a time frame for the agreement.

Preemption: the superseding or invalidating of the law of a lower jurisdiction by the law of a higher jurisdiction; the principle that higher levels of law have primacy over lower levels of law. Federal law can preempt state and local law; state law can preempt local law.

Prescriptive requirement or prescriptive pathway: a requirement, or compliance pathway within a requirement, that specifies actions and items that must be completed in order to bring the building into compliance.

Private right of action: the right of a private party to bring a case.

Procurement: the process by which a unit of government purchases or contracts for goods and services.

Public service commission (PSC)/public utility commission (PUC): a state-level agency that regulates public utilities.

Public service law: a state statute or set of state statutory provisions, and any regulations promulgated thereunder, that regulate public utilities and the provision of energy services.

Public trust: the principle that the government maintains, and is responsible for protecting the public’s right to use, certain resources for the public use.

Ratemaking: the process by which a public service commission sets electricity or gas rates.

Reach code: a local building energy code more stringent than the statewide base building energy code.

Redlining: a practice by banks and federal agencies to deny mortgages for homes in predominately Black or minority neighborhoods. While currently unlawful, redlining was common during several decades of the 20th century, and its impacts persist today.

Regional transmission organization (RTO): an entity very similar to an independent system operator, or ISO, generally operating in a larger region.

Regulation: a rule or order promulgated by an administrative agency. Regulations generally have the force of law.

Regulatory taking: a governmental requirement that restricts the use of private property such that the property owner is deprived of all “economically viable use of his land.”⁵ Per the Fifth Amendment of the U.S. Constitution, a regulatory taking requires the government to pay “just compensation” to the property owner.

Renewable energy: energy derived from sources that are naturally replenishing but flow-limited, including wind, solar, geothermal, hydro, tidal, and more.

Renewable energy certificate or credit (REC): a market-based instrument that represents the property rights to the environmental attributes of one megawatt-hour of renewable electricity generation.

Renewable portfolio standard (RPS): a regulatory requirement, often by a state, to generate a specified percentage of a jurisdiction’s energy from renewable sources.

Resilience: the ability of a community or individual to prevent, withstand, respond to, and recover from disruptive climate impacts.

Retrofit: a modification to an existing building to make it more energy efficient or improve its energy performance.

Setback: the minimum amount of distance required between a lot line and a building line, usually as specified in a zoning ordinance.

Smart meters: meters that measure and record electricity use at frequent intervals (e.g., hourly or every fifteen minutes) and that provide such data to the utility and the customer.

Solar-readiness: a construction standard requiring a building to be wired for solar panels, even if panels are not installed at time of construction.

Split incentive problem: a misalignment of incentives between two parties to a contract, as between a landlord and tenant under a traditional lease, which can ineffectively incentivize both parties to make needed building energy retrofits.

Statute: a law enacted by a legislative body.

Stretch code: a building energy code set at the state level that is more stringent than the statewide base building energy code that local governments may adopt if they choose.

Tailpipe pollution: emissions of local air pollutants as vehicle exhaust.

5 Agins v. City of Tiburon, 447 U.S. 255, 260 (1980).

Tax: a charge imposed by the government on residents, businesses, transactions, or property to raise revenue.

Traditionally regulated (electricity): describes a state jurisdiction in which utilities have vertically integrated monopolies providing both generation and distribution service, such that electricity customers may not choose a power generator other than the local utility.

Utility: a business that provides an essential public service (e.g., electricity and/or other energy) and is therefore subject to regulation as a utility.

Utility-scale energy generation: large-scale energy generation projects, often defined as projects 10 megawatts or larger.

Vehicle-to-grid (V2G): a technology by which a plug-in EV can store energy in its battery and distribute such energy to the electric grid during periods of high demand.

Virtual power purchase agreement (vPPA): a “financial agreement in which a customer agrees to pay a predetermined price for the generated electricity and, typically, the renewable attributes (RECs) from a renewable energy project. Instead of the customer receiving the electricity physically, the project owner sells the energy into the local organized wholesale market; for each MWh, the buyer then pays or receives the difference between the wholesale market revenue and the predetermined PPA price.”⁶ Also referred to as a “synthetic” or “financial” PPA.

VMT: vehicle miles traveled.

Waste-to-energy: the process by which solid waste is used to produce steam in order to generate electricity.

Zero-emissions vehicle (ZEV): a vehicle that does not emit air pollution from the vehicle itself. EVs that are fully-powered by an electric battery are categorized as ZEVs.

Zero waste: an objective or movement to eliminate landfilled waste by diverting waste products such that they can be recovered, reused, and/or recycled.

Zoning: the division of land within a municipality into separate districts with different land use, building size, and other regulations.

⁶ *Glossary of Terms*, AM. CITIES CLIMATE CHALLENGE RENEWABLES ACCELERATOR, <https://cityrenewables.org/glossary/> (last visited Sept. 21, 2021).

1. INTRODUCTION

This guide looks at city decarbonization strategies the way many city sustainability offices do: across the so-called “sectors” that contribute to a city’s total GHG emissions: buildings, transportation, energy, and waste.⁷ In addition, equity, economic inequality, and climate justice are implicated in both the disparate impacts of climate change and the policy choices cities make to address them, and represent an independent component of a growing number of cities’ decarbonization plans.

Sector	Accounting Elements & Policy Actions
Buildings	Emissions from the combustion of fuel in buildings and industrial facilities. ⁸ Buildings are often a city’s largest or second largest source of GHG emissions. City building decarbonization tools include building energy benchmarking, energy efficiency or electrification retrofits, local building codes, restricting or prohibiting certain fuels, and more.
Transportation	While transportation emissions could, in theory, include all GHGs from all journeys undertaken by all city residents, wherever they travel and by whatever mode, a city’s inventoried transportation emissions generally include only trips made within its boundaries. This means that a city’s GHG inventory captures trips made by non-residents through the city, but not the carbon footprint of residents traveling outside of the city, including by air. Transportation is often a city’s largest or second largest source of GHG emissions. Policy approaches to reducing transportation GHGs at the city level include new land use requirements, investments in public transit and bicycle/pedestrian infrastructure, trip demand reduction strategies like congestion pricing, and scaling up electric vehicles.
Energy	For inventorying purposes, energy generation is counted alongside buildings in the “stationary energy” sector. However, for the variety of policy options available to help cities scale up green energy and phase out fossil fuels, it merits its own policy category. Green energy policy tools include those both at the distributed scale – like rooftop solar panels, community solar programs, and microgrids – and the utility scale, including large purchases of renewable energy or renewable energy credits (RECs) through green tariffs, power purchase agreements, and community choice aggregation programs.

continued on next page

7 The emissions sectors are drawn from the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (the “GPC”), an accounting standard developed by the World Resources Institute, C40 Cities, and ICLEI. The GPC sets out a uniform methodology for calculating a city’s annual GHG emissions. For cities with the resources to conduct one, a yearly GHG inventory can help a city understand its emissions sources, compare them to other cities, and track reductions over time. For municipalities that cannot or do not compile GHG inventories, the GPC framework and sectors are still useful tools for delineating the policy categories across which cities create – and therefore can reduce – GHG emissions.

8 WEE KEAN FONG ET AL., GLOBALE PROTOCOL FOR COMMUNITY-SCALE GREENHOUSE GAS EMISSION INVENTORIES 15 (World Resources Institute et al., eds., 2014).

Sector	Accounting Elements & Policy Actions
Waste	<p>Emissions attributable to waste generated within the city, regardless of where it is sent for treatment or ultimate disposal.</p> <p>Emissions from waste account for around five percent of a city's total. Policy tools to reduce GHG emissions from waste, while also reducing reliance on landfills and addressing environmental injustices, include increased recycling and organic waste collection, construction waste management requirements, bans on single-use plastic items, and regulation of waste haulers.</p>

Consumption-Based Emissions

It's important to note what GHG emissions – and therefore what policy categories – are not considered in this guide. City GHG inventories generally do not include **consumption-based emissions**, an accounting of which would “capture[] direct and lifecycle GHG emissions of goods and services... and allocate[] GHG emissions to the final consumers of those goods and services, rather than to the original producers¹⁰ of those GHG emissions.” In other words, GHG emissions attributable to the manufacture, transport, and disposal of goods purchased (or food eaten) by a city resident would be counted towards that city's consumption-based GHG inventory rather than towards the place of such manufacture, transport, or disposal. As of this writing, few U.S. cities inventory their consumption-based emissions, and the policy options available to cities for reducing consumption-based emissions are less developed. For these reasons, municipal carbon reduction policy usually focuses on the sector-based approach to GHG accounting and mitigation, and the legal discussion here does as well. While not covered here, reducing consumption-based emissions merits the development of policy tools at the local level, as emissions can¹¹ be significant.

The chapters that follow explore city carbon reduction policies in each of the four sectors, and unpack the U.S. federal, state, and local legal issues that can arise in pursuing these decarbonization strategies. In addition, these chapters discuss cross-cutting legal frameworks that inform many areas of city climate policy, as well as legal concepts that influence how equity may be incorporated into those policy domains. The legal discussion is meant to highlight potential issues and offer a range of paths forward that cities may consider in pursuing their municipal carbon reduction goals. Equity considerations are addressed in a standalone chapter because, while not captured in a GHG inventory, a city's approach to carbon reduction and mitigating the impacts of climate change is interwoven with its

9 C40 Cities Climate Leadership Group, *Why Cities Need to Advance Towards Zero Waste*, C40 KNOWLEDGE (May 2019), https://www.c40knowledgehub.org/s/article/Why-cities-need-to-advance-towards-zero-waste?language=en_US.

10 MICHAEL DOUST ET. AL, CONSUMPTION-BASED GHG EMISSIONS OF C40 CITIES 4 (2018).

11 This guide also does not address local policy tools for reducing emissions from agricultural and industrial sources (beyond GHGs attributable to the four listed sectors). Emissions accounting guidance for these sectors is available in the *GHG Protocol for Cities*, *supra* note 8.

INTRODUCTION

commitment to hearing the voices and meeting the needs of Black, indigenous, and people of color (BIPOC) and low-income residents. City decarbonization with an equity focus can also tie together policy goals aimed at creating jobs, making housing more affordable, and reducing localized air pollution in low-income and minority communities.

No two municipalities have identical sets of legal constraints. The variation between states' municipal enabling statutes and other law, municipalities' local laws, and cities' myriad fiscal, political, and other nonlegal considerations means that each city's analysis will differ. This report cannot serve as a substitute for legal advice; it is an independent study provided for informational purposes. No party should act or rely on any information contained in this report without first seeking the advice of an attorney. Each local government will need to undertake its own legal analysis in assessing decarbonization policy options. This report can help focus attention on the most salient questions.

2. CROSS-CUTTING LEGAL CONCEPTS

Carbon mitigation policies across the buildings, transportation, energy, and waste sectors each give rise to unique and specific legal considerations, but these legal issues largely flow from basic municipal and environmental law concepts that attorneys in each of those spaces encounter again and again. This section provides an overview of the fundamental legal principles at play in local climate law.

Municipal Home Rule and Dillon’s Rule

*“The city is the creature of the State.”*¹²

Cities, towns, villages, counties, and other municipalities are “merely subdivisions of the state,”¹³ meaning that they have only the authority delegated to them by the state in which they are located. Attorneys and policymakers should assume that no two municipalities have the same grant of authority unless they derive such authority from the same statutory provisions. For each carbon mitigation policy being considered, attorneys will need to review both the applicable state statute granting authority to the municipality and any applicable federal and state law that might preempt the proposed action.

A municipality’s grant of authority by the state may be under a **municipal home rule (Home Rule)** or a **Dillon’s Rule** system.¹⁴ Under Home Rule, the state delegates a broad set of authorities to local governments under a state Home Rule law. In some Home Rule jurisdictions, a local government can adopt a charter, which serves as a city’s constitution and allows for significant latitude to self-govern. Charter or no charter, cities operating under Home Rule generally have fewer limitations on their authority. In a Dillon’s Rule jurisdiction, a municipality has no authority beyond what is granted expressly by state law. A state may be a home rule jurisdiction with respect to some municipalities and a Dillon’s Rule state with respect to others.

A related concept is the **police power**, which represents a local government’s authority to regulate with respect to its own affairs and with respect to the general health and welfare (specific definitions vary across jurisdictions). States retain the police power from the federal government pursuant to the Tenth Amendment of the U.S. Constitution, and often delegate it to units of local government. Such a delegation may be made both in home rule and Dillon’s rule jurisdictions, in a municipal home rule statute or elsewhere in state law. The police power is routinely invoked by local governments in developing climate policy, on its own and as a supplement to other sources of local authority. For example, local laws aimed at building emissions can improve local air quality and modernize affordable housing stock, both of which relate to residents’ general health and welfare.

¹² Trenton v. New Jersey, 262 U.S. 182, 189-90 (1923).

¹³ See, e.g., City of New York v. State, 86 N.Y. 2d 286, 289-90 (N.Y. App. Div. 1995).

¹⁴ For a “snapshot” of states using the Home Rule and Dillon’s Rule frameworks, see Travis Moore, Nebraska Legislative Office, *Dillon Rule and Home Rule: Principles of Local Governance* (Feb. 2020), https://nebraskalegislature.gov/pdf/reports/research/snapshot_localgov_2020.pdf.

State Law Considerations

Preemption by state law

State law has primacy over local law. While states may offer broad grants of authority to local governments, state law always has the potential to preempt – or be controlling over – conflicting local laws. State law may preempt local law in two basic ways:

Conflict preemption: a state and local law directly conflict such that the local law cannot stand. The state law, as the controlling level of law, effectively displaces the conflicting local law.

Field preemption: the state legislature indicates, expressly or impliedly, that by legislating in an area it intends to preempt local law in an entire subject area or field.

Preemption by state law can arise in any area of local climate policy – the landscape is notably varied across states. In considering any law or requirement to reduce GHG emissions, cities must not only look for a source of authority from state law but also confirm that no state law preempts it.

State law frameworks for taxes, fees, penalties, and tolls

States set the framework for municipal authority, and therefore state law has significant implications for what city law and policy can, and cannot, do when it comes to efforts to price carbon emissions or energy use in some way, as through taxes, fees, penalties, and tolls.

Taxes and fees: Many cities have more authority to enact a fee than a tax. Under state law, a **fee** is generally defined by some combination of three criteria: *benefit* (the payer gets a benefit beyond basic governmental services), *voluntariness* (the payer could avoid the fee by not using the government service), and *non-revenue purpose* (amounts collected compensate the government, not raise additional funds).¹⁵ A **tax**, on the other hand, doesn't require that the payer receive any specific benefit, but taxes must follow the “uniformity principle”: that taxpayers, within reasonably established classes, are treated equally.¹⁶ Municipal authority to tax, if granted, is set out in state law. A city without authority to tax will need to either carefully tailor monetary amounts to meet the definition of a fee or work with its state to pass enabling legislation.

Penalties: Municipal authority to impose fines or penalties must be delegated by the state – either expressly or impliedly. A few basic rules of thumb apply. First, penalties must be reasonable, a standard that will vary by jurisdiction. At a minimum, this means that fines cannot “be excessive, accumulative for the same offense, or cruel or unusual.”¹⁷ As with fees, penalties often cannot be designed to raise revenue for the municipality. State law can impose other limitations on municipalities, such as maximum penalty amounts and guardrails around whether a penalty may be civil or criminal.

¹⁵ Laurie Reynolds, *Taxes, Fees, Assessments, Dues, and the “Get What You Pay For” Model of Local Government*, 56 FL. L. REV. 373, 412 (2004).

¹⁶ *Id.* at 384.

¹⁷ U.S. CONST. amend. XIII, cl. 2. and analogous state constitutional limitations.

Road tolls: State statutes also vary with respect to local government authority to collect tolls on local roads. In New York State, municipalities cannot collect tolls at all without specific authorizing legislation from the state.¹⁸ In Oregon, they can, though there are restrictions on how tolling revenues may be used.¹⁹ And in Washington, localities can create “transportation benefit districts” that have the authority to toll so long as such tolls are approved by “a majority of the voters in the district voting on a proposition at a general or special election.”²⁰ (Federal law also imposes restrictions on tolling certain highways and bridges.) As a result, some cities will have an easier time than others in finding the requisite state authority to implement congestion pricing and other tolling schemes.

Reallocation or delegation of authority

Delegation of significant legislative authority can be problematic. Pursuant to the **nondelegation doctrine**, elected officials and bodies generally cannot delegate their legislative authority to subordinates or administrative bodies, unless so authorized by law.²¹ Cities must adhere to applicable state law in determining what decisions are appropriate for administrative agency rulemaking or for input by an appointed board and what policy decisions must be retained by the executive or legislature. For example, legislators may wish to delegate significant decision-making power to the local department of buildings or another agency. This is likely permissible to some extent, but must be tailored to state legal parameters. Similarly, climate laws and programs that require the appointment of an expert or citizen advisory committee need to ensure that ultimate policy-making authority rests with a city’s duly elected officials. Relationships with contractors should also be viewed through this lens.

Public utilities

The complex regime regulating public utilities at the state and federal level often leaves little authority at the municipal level, though cities do have some tools at their disposal (see Chapter 6). Most states have comprehensive public utilities or public service laws and regulations, and these requirements will often preempt local lawmaking in this area.

Federal Law Considerations

Local governments are also subject to federal preemption and other limitations of federal law.

Preemption

The Supremacy Clause of the U.S. Constitution²² establishes the primacy of federal law – both statutes and regulations – over state law. Because a city is a “creature of the state,” federal law holds primacy over local law as well. Therefore, where a local law conflicts with existing federal law, the federal law can preempt, or take precedence over, the local law.

¹⁸ N.Y. VEH. & TRAF. LAW § 1630 (2019).

¹⁹ OR. REV. STAT. § 383.004(2) (2007); OR. CONST. art. IX, § 3a.

²⁰ WASH. REV. CODE § 36.73.065 (2010).

²¹ See, e.g., *Kelley v. Shelby Cnty Bd. of Ed.*, 198 F.Supp 3d 842, 852 (W.D. Tenn. 2016); *State ex rel. City of Aventura v. Jimenez*, 211 So. 3d 158, 165 (Fla. Dist. Ct. App. 2016); *Sinclair v. New Cingular Wireless PCS, LLC*, 283 Va. 567, 581 (Va. 2012).

²² U.S. CONST. art. VI, § 2, cl. 2.

A variety of federal statutes could preempt city climate laws. Two that are particularly likely to preempt state and city level climate laws are certain portions of the Clean Air Act²³ and the Energy Policy and Conservation Act (EPCA).²⁴ The preemptive effect of these federal laws is discussed in Chapter 4, Buildings, and Chapter 5, Transportation.

Constitutional restrictions

The U.S. Constitution contains some basic restrictions on how governmental actors, including state and local governments, may behave. Some of them appear in the next section, like the Fourth Amendment restriction on unreasonable searches and seizures (see privacy) and the Fifth Amendment Takings Clause (see land use). Other relevant constitutional considerations include:

The ***dormant Commerce Clause*** bars states and local governments from passing laws that discriminate against out-of-state economic competitors.²⁵ Climate-related laws and policies can generally be crafted to avoid discriminating against interstate commerce, but the issue must be considered. For example, a city government could not mandate that local waste processing businesses refuse out-of-state waste to avoid generating GHGs in processing that waste.²⁶

The ***Equal Protection Clause of the Fourteenth Amendment*** prohibits state and local governments from denying any citizen “equal protection of the laws.”²⁷ Litigants sometimes make Equal Protection claims, as they did in cases regarding differential tolls for out-of-state residents²⁸ and fleet pricing for for-hire vehicles;²⁹ notably, in both of these cases, the Equal Protection claims were held meritless. Equal protection questions may also arise in connection with policies dually aimed at racial equity and climate mitigation, and are addressed further in the next chapter.

Legal Considerations that Straddle Federal, State, and Local Law

Many areas of the law are not set solely at the federal, state, or local level; rather, laws at all levels of government can pose unique complications. Three such areas – privacy, land use, and environmental review – are discussed here.

Privacy

City GHG reductions depend on measuring emissions and tracking and sharing information. These activities have repercussions for individual privacy and data security. Privacy law includes requirements under federal, state, and local law. Though the most basic privacy protection is the Fourth Amendment protection from unreasonable searches and seizures,³⁰ privacy concerns have been raised with respect to tolling and congestion pricing programs

23 Clean Air Act, 42 U.S.C. §§ 7401-7515 (1970).

24 Energy Policy and Conservation Act, 42 U.S.C. §§ 8251-8279 (1975).

25 U.S. CONST. art. I, § 8, cl. 3; see *Wyoming v. Oklahoma*, 502 U.S. 437, 454 (1992).

26 *City of Philadelphia v. New Jersey*, 437 U.S. 617, 622 (1978).

27 U.S. CONST. amend. XIV, § 1.

28 *Cohen v. Rhode Island Turnpike and Bridge Auth.*, 775 F.Supp. 2d 439, 442 (D.R.I. 2011).

29 *Taxifleet Mgmt. LLC v. State of N.Y.*, No. 161920/18 (N.Y. Sup. Ct. Jan. 16, 2019).

30 U.S. CONST. amend. IV.

(which use license plate-reading cameras and/or GPS data) and smart meters (which track energy use data in real time).

Land use

Land use authority is a vital tool in combatting climate change at the city level. Local governments must consider elements of federal, state, and local law in asserting their land use powers.

Zoning is the process of prescribing permitted and prohibited uses in different geographic areas of a city. While zoning ordinances are usually local laws, zoning is often enabled by state law, which may limit local authority. Zoning ordinances may also be preempted by conflicting state laws. Zoning has been held by the Supreme Court to be an appropriate exercise of a local government’s police powers.³¹

Eminent domain refers to the power of a government to take private property for public use. Per the Fifth Amendment of the U.S. Constitution, a taking by eminent domain requires that just compensation be paid to the property owner. States inherently hold eminent domain authority, which they may or may not delegate to municipalities. The Supreme Court has upheld the use of eminent domain for a range of public purposes.³²

Regulatory takings are a form of taking in which the government does not actually occupy or take title to physical property, but rather, through lawmaking or another governmental restriction, deprives a property owner of “all economically beneficial use” of their property.³³ A significant amount of federal and state case law helps define what is and is not a regulatory taking. While states (and if delegated to cities, cities) can effect regulatory takings, they cannot do so without providing just compensation.

Environmental review

The federal government and many states have environmental review statutes requiring municipalities to assess the environmental impacts of their actions. These environmental review requirements offer an easy legal “hook” that project opponents can use to challenge an effort to reduce emissions. A city’s careful adherence to all substantive and procedural requirements of these environmental review laws can help ensure an effort to transform a streetscape, build distributed energy resources, or invest in green building survives legal challenges.

31 Vill. of Euclid, Oh. v. Ambler Realty Co., 272 U.S. 365, 397 (1926).

32 See, e.g., Kelo v. City of New London, Conn., 545 U.S. 469, 490 (2005) (upholding New London’s exercise of eminent domain power to promote economic development as a valid “public use”).

33 Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1019 (1992).

3. EQUITY

Climate policy and issues of justice and equity are intricately interwoven at all levels of government, but perhaps nowhere more so than locally – in the places where people live and build community. Nearly all of the approaches in this guide have the potential for adverse equity impacts, whether from investment in electric vehicle (EV) infrastructure without phasing out diesel buses and trucks; rising energy bills that disproportionately burden low income households; or a rollout of building retrofits that results in improvements for wealthy homeowners or, conversely, for affordable buildings without adequate renter protections, causing displacement.

Some U.S. cities have developed climate justice or equity plans – policy roadmaps that center the concerns and well-being of environmental justice (EJ) communities, low-income residents, and others experiencing frontline climate impacts.³⁴ Cities that don't have climate justice plans will still find that their GHG reduction measures have potential adverse equity impacts, as well as potential equity opportunities. Indeed, a low-GHG city can be one with reduced local pollution, increased economic opportunity, and protections for the communities most harmed by climate change.

This chapter highlights the legal implications of equitable climate policy in the city context.

Equity Defined

The terms *equity* and *climate justice* do not have one agreed meaning that fits every circumstance. In the international context, for example, these concepts may refer to the allocation of responsibility for climate action to nations that have contributed more to global GHG emissions. In the American local context, equitable policy often aims to address environmental injustices, economic inequality, segregation, and systemic racism.

In their climate policymaking, the City and County of Honolulu offer five types of equity for consideration: (1) **procedural equity** (“accessibility and inclusivity of decision-making processes by those most impacted”); (2) **distributional equity** (“benefits are distributed to prioritize those most in need”); (3) **structural equity** (“transparency and accountability are institutionalized and regulated”); (4) **intergenerational equity** (“decisions prioritize the health & well-being of future generations”); and (5) **cultural equity** (“the acknowledgement and undoing of racism with the concurrent construction of multicultural norms”).³⁵

Austin, Texas offers a definition of climate equity that expressly incorporates racial equity, where “[r]acial equity is the condition when race no longer predicts a person’s quality of

³⁴ See, e.g., CITY OF PROVIDENCE, CLIMATE JUSTICE PLAN 4 (2019).

³⁵ *Climate Resilience & Equity*, CITY AND CNTY. OF HONOLULU OFF. OF CLIMATE CHANGE, <https://resilientoahu.org/equity> (last visited Apr. 30, 2021).

life outcomes in our community.”³⁶ In this view, equitable climate policy requires grappling with a “history of racial segregation and EJ issues in Austin,” to redress climate change’s disproportionate harm to BIPOC (Black, indigenous, and people of color) residents.

Sources of Legal Rights Underpinning Climate Justice

Existing law offers little leverage for communities advocating for equity and climate justice in the city context. Courts to date have hesitated to find robust federal rights to environmental justice, and the facts of environmental justice cases – often relating to the siting of polluting facilities – differ from city climate policymaking. Nonetheless, equitable climate policy may draw on several sources of law:

Presidential actions

President Clinton’s Executive Order 12,898 of 1994 directed federal agencies to incorporate environmental justice into their missions and policies.³⁷ More recently, President Biden issued orders relating to climate³⁸ and to discriminatory housing practices.³⁹ In these latter orders, the Biden administration sets out its “policy to deploy the full capacity of its agencies to combat the climate crisis... [and] deliver[] environmental justice,” including providing for “substantive engagement by stakeholders, including State, local, and Tribal governments.”⁴⁰ These orders come into play only with respect to federal actions, but may be useful to cities in advancing equitable climate policy where federal funding, approvals, permits, facilities, or other discretionary measures are involved. They can also serve as a model for implementing local policy.

State and local climate and environmental justice laws

Increasingly, state and local laws tackle equity alongside emissions reductions. Some of these laws have direct implications for local climate policymaking. For example, New Jersey’s 2020 environmental justice law mandates, with some exceptions, permit denials for facilities determined through an environmental justice review to, “together with other environmental or public health stressors affecting [an] overburdened community, cause or contribute to adverse cumulative environmental or public health stressors in the overburdened community that are higher than those borne by other communities” in the state.⁴¹ New Jersey lists more than 300 municipalities that contain “overburdened communities.” New York State’s and New York City’s separate climate laws contain protections for frontline communities. The state Climate Leadership and Community Protection Act requires that, where GHG offset projects are used, projects that offer localized benefits to “disadvantaged communities” be prioritized, and that cumulative emissions impacts in disadvantaged communities as a result

36 Memorandum from Brion Oaks, Chief Equity Officer, City of Austin, to City Department Directors (Oct. 22, 2019), <http://www.austintexas.gov/edims/pio/document.cfm?id=329993>.

37 Exec. Order No. 12,898, 59 Fed. Reg. 7,629 (Feb. 11, 1994).

38 Exec. Order. No. 14,008 86 C.F.R. 7620 (Jan. 27, 2021).

39 Memorandum on Redressing Our Nation’s and the Federal Government’s History of Discriminatory Housing Practices and Policies, 86 C.F.R. 7487 (Jan. 26, 2021).

40 Exec. Order. No. 14,008 86 C.F.R. 7620 (Jan. 27, 2021).

41 N.J. REV. STAT. § 13:92 (2020).

of measures to reach net zero be considered.⁴² New York City law requires that, in reducing emissions from city government operations, the city should use “methods to ensure equitable investment in environmental justice communities that preserve a minimum level of benefits for all communities and do not result in any localized increases in pollution.”⁴³ The city’s law also requires a study regarding a potential emissions trading program for buildings to consider strategies that do not result in increased local air pollution.⁴⁴ More traditional environmental review laws are also playing an increasing, if still modest, role in encouraging equitable siting decisions in ways that could have implications for city climate policy. The U.S. Court of Appeals for the Fourth Circuit recently vacated a Virginia state permit for a new compressor station, citing both a state law requiring consideration of the “suitability of [a project] to the area in which it is located”⁴⁵ and the “potential for disproportionate health impacts on the predominantly African-American community.”⁴⁶

Spending commitments

State and local climate laws may also address equity in relationship to spending. New York State’s Climate Leadership and Community Protection Act pledges that at least 35 percent of the “overall benefits of spending on clean energy and energy efficiency” will go to “disadvantaged communities.”⁴⁷ Washington’s 2021 climate law pledges at least 35 percent of proceeds from a cap-and-invest program to “provide direct and meaningful benefits to vulnerable populations within the boundaries of overburdened communities.”⁴⁸ President Biden has made a similar pledge for 40 percent of spending in his executive order on climate.⁴⁹ The details of what projects will qualify and what communities will be served by these spending pledges are works-in-progress.

Federal civil rights law

Title VI of the Civil Rights Act of 1964 prohibits discrimination “on the ground of race, color, or national origin” by any activity receiving federal funding.⁵⁰ Title VI litigation has not yielded significant wins for environmental justice plaintiffs. The Supreme Court held that Title VI contains an implied private right of action to enforce Section 601, which prohibits intentional discrimination, but that Section 602 – under which federal agencies promulgate civil rights regulations – contains no such right of action.⁵¹ The U.S. Court of Appeals for the Third Circuit further held that plaintiffs had no private right of action under Section 1983 (which allows individuals to sue the government for civil rights violations) to enforce Section 602 regulations.⁵² In other words, private citizens can sue to enforce the federal government’s

42 N.Y. ENVT’L CONSERVATION L. § 75-0109 (2020).

43 NEW YORK CITY ADMIN. CODE L. § 24-803 (2019)

44 *Id.*

45 Va. Code Ann. § 10.1-1307(E)(3) (2021).

46 *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 71 (4th Cir. 2020).

47 N.Y. ENVT’L CONSERVATION L. §§ 75-0117, 75-0101(5) (2020).

48 2021 Wash. Sess. Laws S.5126.

49 Exec. Order. No. 14,008 86 C.F.R. 7620 (Jan. 27, 2021).

50 42 U.S.C. § 2000d (1964).

51 *Alexander v. Sandoval*, 532 U.S. 275, 293 (2001).

52 *South Camden Citizens in Action v. New Jersey Dep’t of Env’tl Prot.*, 274 F.3d 771, 790 (3d Cir. 2001); 42 U.S.C. § 1983 (1996).

underlying obligation not to discriminate against individuals (i.e., the rights protected by Section 601), but not for the specifics of federal agency compliance with the regulations such agencies promulgate to ensure they act in nondiscriminatory ways (i.e., the duties of federal agencies set forth in Section 602).

Outside of the courts, Title VI was cited recently by the U.S. Department of Transportation when it paused a proposed highway expansion in Houston to review its impacts on minority communities.⁵³ Therefore, civil rights law may be relevant in two ways: (1) though it has not been fruitful for EJ plaintiffs, new fact patterns may merit another look at this type of claim; and (2) federal and state agencies may increasingly view projects through a Title VI lens.

Equal protection under the U.S. Constitution

To counter historic and ongoing discrimination, cities may wish to develop climate policies specifically aimed at mitigating climate impacts on minority communities and residents. Federal law can make this challenging. Under the Fourteenth Amendment to the U.S. Constitution – which contains the Equal Protection clause – and the case law interpreting it, governmental classifications based on race are subject to “strict scrutiny,” a standard of review that requires a showing of a “compelling governmental interest” and a governmental response “narrowly tailored” to respond to that interest.

City of Richmond v. J.A. Croson, a Supreme Court case relating to local procurement policies, is instructive here. There, the Supreme Court held that a local procurement policy that required prime construction contractors to award at least 30 percent of the dollar amount of a prime contract to subcontractors that were minority business enterprises, or MBEs, did not pass strict scrutiny review.⁵⁴ While the Court allowed that evidence of discrimination in the local construction industry could satisfy the “compelling governmental interest” prong of strict scrutiny analysis, it was not sufficient in this case, where the city pointed only to a general history of discrimination in the construction industry.⁵⁵ Moreover, the Court held that, even if discrimination could be shown with “the particularity required by the Fourteenth Amendment,”⁵⁶ Richmond’s response was not “narrowly tailored” to remedying the discrimination: it was not geographically restricted and there were no waivers for contractors unable to meet the 30 percent requirement.⁵⁷ The Court left open the possibility that race-conscious procurement policies could be constitutional, so long as they addressed a “compelling governmental interest” and were “narrowly tailored” to addressing that interest. In the years since *Croson*, many local governments have been able to demonstrate that local discrimination rises to the level of a “compelling governmental interest” and have narrowly tailored their procurement policies in response. Developing race-conscious policy in the climate context has not yet taken hold in a large number of U.S. cities, but the roadmap for doing so in a way that that passes muster under

53 Aman Azhar, *Expansion of I-45 in Downtown Houston Is on Hold, for Now, in a Traffic-Choked, Divided Region*, INSIDE CLIMATE NEWS (Apr. 30, 2021), <https://insideclimatenews.org/news/30042021/expansion-of-i-45-in-downtown-houston-is-on-hold-for-now-in-a-traffic-choked-divided-region/>.

54 *City of Richmond v. J.A. Croson*, 488 U.S. 469, 509 (1989).

55 *Id.* at 501-02.

56 *Id.* at 492.

57 *Id.* at 476.

the Equal Protection clause is laid out in *Croson* and later cases.

Equal protection claims have been largely unsuccessful in redressing environmental injustices alleged by private plaintiffs. The Supreme Court held that disparate “impact alone is not determinative” in establishing a violation of the right to equal protection,⁵⁸ meaning plaintiffs must show “an invidious discriminatory purpose.”⁵⁹ This line of reasoning has been used to dispose of environmental justice claims. In *Bean v. Southwestern Waste Management Corp.*, plaintiffs demonstrated a discriminatory pattern in landfill siting, but were unable to convince a federal district court in Texas of discriminatory intent.⁶⁰ In another case, *R.I.S.E. v. Kay*, the Fourth Circuit noted the “disproportionate impact [of landfill siting] on black residents,” but found that the siting board did not act in an “unusual or suspicious way.”⁶¹ Siting decisions are merely one facet of equitable local climate policy, and local governments have agency over many siting decisions, but not all. In instances where parties other than local governments make siting decisions, equal protection may not be a useful tool in overturning discriminatory decisions.

Barriers to Equitable Policy in Existing Local Law

Where climate policy decisions are made

Inequitable climate policy is to some extent a procedural problem: those with more money, time, and historic representation are overrepresented in the fora where policy is made. This procedural failure yields policies that perpetuate historic injustices and inequalities, an outcome exacerbated by the disproportionate impacts of climate change experienced by low income and minority communities. In developing climate policy, local governments may need to take a look at their current lawmaking processes to ensure that decisions are made in a transparent, inclusive way with opportunities for public input. These considerations may differ between the legislative and policy design phases, as well as from opportunities for engagement during policy implementation. It may be the case that a city’s land use decision-making process, for example, already allows for public engagement, while other areas of climate policymaking do not. Making climate policymaking more participatory could involve changes that affect not only multiple local agencies, but state law as well.

Decision-making around climate policy implementation can implicate not only procedural equity, but also distributional – or outcomes-oriented – equity. Often, larger and better-funded environmental groups are more likely to have the funding and capacity to monitor policy implementation, while environmental justice and community organizing groups may need to shift focus to new priorities once the policy design phase is complete. These latter groups’ voices can be lost in policy implementation decisions, meaning they are deprived of procedural equity *and*, potentially, suffer outcomes that are worse for the communities they serve. GHG-mitigating policy is not necessarily equitable policy, and implementation decisions can exacerbate gentrification, displacement, and other inequitable outcomes.

58 *Vill. of Arlington Heights v. Metro. Housing Dev. Corp.*, 429 U.S. 252, 259 (1977).

59 *Washington v. Davis*, 426 U.S. 229, 236 (1976).

60 *Bean v. Southwestern Waste Mgmt Corp.*, 482 F.Supp. 673, 680 (S.D. Tex. 1979).

61 *R.I.S.E. v. Kay*, 977 F.2d 573, 1992 WL 295129, at *2, *4 (4th Cir. Oct. 15, 1992).

Procurement & contracting

While energy transition rhetoric touts the creation of new, green jobs, local procurement and contracting policies may disfavor efforts to hire members of frontline communities for this work. Cities may need to review existing policies for hiring staff and contractors; some will already have policies favoring minority and/or women-owned businesses that could be updated to reflect current priorities. Relatedly, sound local climate policymaking often relies on the input and expertise of frontline community members, who can provide critical information about both community and individual needs and the potential consequences of proposed decarbonization strategies. Local procurement and contracting requirements may need to be reviewed to allow city agencies to formally partner with and pay individuals and community groups for their work in convening stakeholders or informing city policy. Existing provisions of state or local law may inhibit some changes to procurement and contracting practices. In particular, some jurisdictions will have “race-neutral” requirements, meaning that policies may not take race into account in decision-making (in addition to federal equal protection limitations). (Race-neutral policies often represent important efforts to remedy racial segregation and discrimination; this report does not mean to suggest that they are universally problematic, merely that they can inhibit anti-racist or redistributive climate policy.) Legal tools that local governments may have at their disposal to make hiring and procurement practices equitable include community workforce agreements and project labor agreements, using existing authority to ensure acceptable compensation and workplace standards, and enforcing workplace requirements.⁶²

Barriers to Equitable Policy in State Law

Limits of local authority and state preemption

As in connection with all aspects of climate policy, state law defines the contours of local authority and can preempt local efforts to advance equity. In some instances, a state law may directly preempt a specific policy designed to advance the dual goals of climate action and equity. In others, state legislators may preclude the community process that would lead to such a policy’s development.

Funding for equitable climate action

State law can restrict localities’ ability to access needed funds. The city of Milwaukee, for example, has highlighted the need for funding for climate and economic equality efforts and the “severe revenue constraints imposed [on the city] by the state.”⁶³ State-driven funding limitations can arise in a few ways:

62 See David Madland & Terry Meginniss, *5 Ways State and Local Governments Can Make Climate Jobs Good Jobs*, CTR. FOR AM. PROGRESS (Oct. 9, 2020, 9:03 AM), <https://www.americanprogress.org/issues/economy/reports/2020/10/09/491226/5-ways-state-local-governments-can-make-climate-jobs-good-jobs/>. For a more comprehensive look at developing “highroad” workforce policies, see INCLUSIVE ECONOMICS, HIGH-ROAD WORKFORCE GUIDE FOR CITY CLIMATE ACTION 16 (Urb. Sustainability Dirs. Network eds., 2021).

63 CITY OF MILWAUKEE TASK FORCE WORKING GRPS. & LEGIS. REF. BUREAU, MILWAUKEE CITY-CNTY. TASK FORCE ON CLIMATE AND ECON. EQUITY, PRELIMINARY REPORT 37 (Mar. 2020).

Direct limits on available funds. States can place direct limits on the amount of capital available to a local government, either by failing to provide needed amounts or by limiting the amount of debt a municipality may take on in its own name.

Restrictions on ability to tax. A city's authority to impose taxes is dictated by state law, which often limits or prohibits local taxation authority without state approval. This leaves cities in one of two positions: (1) without the funds to undertake policies that would reduce emissions and advance equity goals, or (2) attempting to shoehorn the cost recovery mechanism into the legal definition of a fee or exaction. Fees involve the exchange of money for a service, and exactions involve payments for the right to proceed with development. They do not treat all payers within a class equally, as a tax would. If local governments are forced to structure climate expenditures as fees for services provided, these expenditures could cause inequitable investment in favor of those who are able to pay.

Restrictions on uses of funds. In some instances, the limitation is not on the collection of funds but on their use. For example, the New York State Constitution prohibits cities from spending local (but not state or federal) tax dollars to improve private property.⁶⁴ While in some cases, this may serve as a protection against inequitable investment, it can also prevent a local government from providing financial assistance to low income homeowners, for example, to retrofit their homes. As another example, Oregon law limits the use of road tolls collected by cities for construction and maintenance of "highways, roads, streets and roadside areas."⁶⁵ While projects like bike lanes and bus shelters are arguably permissible uses of this funding, other projects to advance an equitable transportation system – like larger-scale public transit improvements – may not be.

State public utilities law

The preemptive effect of state public service or public utilities laws is addressed in Chapter 6. These state laws can also cover a range of areas that have direct implications for equity, climate justice, and energy justice (which refers to efforts to make the energy system more equitable and democratic). Critically, the state public utility commission is usually the forum in which electricity rates are set, pursuant to state law that guarantees a return to the utility; thus, a city's proposed climate policies may impact energy costs for energy-burdened households without any mechanism by which the city can correct for rising energy bills.

Advocates for energy justice have championed an evolving vision for municipalization of local investor-owned utilities (IOUs), seeing publicly-owned power as a potential way to move away from GHG-emitting sources of electricity and to ensure a transition to a clean power system that prioritizes the needs of frontline community members (still, no major IOU has been municipalized in the last decade). Municipalization is governed by a complex combination of state and federal laws that dictate the large sums needed to buy out or otherwise make the existing IOU whole. Depending on state law, quasi-municipalization tools like community choice aggregation may be more attainable for some communities.

64 N.Y. CONST. art. VII § 10-a.

65 OR. CONST. art. IX § 3a.

Equity as Applied in City Climate Policy

Throughout this guide, we discuss how city climate policy intersects with equity and climate justice. Some of the significant intersections are summarized here:

Buildings

Building decarbonization has significant impacts for the quality of housing, housing costs, and neighborhood gentrification and displacement. Given the complexity of these factors, and their potentially contradictory nature (e.g., building energy retrofits can improve housing stock for low-income residents but also catalyze gentrification; all-electric construction requirements lessen indoor air pollution but can drive up energy costs or introduce new costs for both those who've shifted to electricity and those left on the old natural gas system), it is critical to ensure that frontline communities and others living in affordable or rent-stabilized housing have a say in policymaking. Building policy plays out in the context of state law, particularly with respect to building codes, public service law, and the energy distribution system.

Transportation

Transportation has a significant impact on day-to-day lived experiences. Three important things to keep in mind are: First, an accessible, reliable public transit network has the potential to expand access to economic opportunity and improve public safety; climate and equitable access to transit should therefore be considered in tandem. Second, while shifting from internal combustion engine to electric vehicles is critical, many will still be unable to afford a vehicle, or will choose not to purchase one. For this and numerous other reasons, a more holistic look at a city's or region's transportation system is needed, including at public transit and active transportation options like bicycling and pedestrian paths. Third, as opportunities to replace portions of a city's fleet with electric buses, garbage trucks, and other municipal vehicles arise, thought should be given to replacing emitting vehicles in neighborhoods with high local air pollution, including at bus and truck depots where vehicles often idle. In many cases, low-income and BIPOC residents experience elevated exposure to local air pollutants, leading to disproportionately higher incidences of childhood asthma and other health conditions.

Energy

The energy transition intersects with equity in at least three critical ways. First, shifting from fossil-powered energy generation facilities, which spew copious local air pollution, to clean resources like wind and solar has the potential to significantly improve local air quality in the often low-income and/or minority communities near fossil power plants. However, the transition can be rolled out inequitably, with older gas-and coal-fired facilities in frontline neighborhoods among the last to be shut down. Second, without governmental interventions, shifting to new energy sources – particularly electricity – can increase overall energy bills for already-burdened households, including those left connected to fossil sources like natural gas. Local governments may not be able to counteract this effect on energy costs without state cooperation. Third, the energy transition will create new jobs – who gets them? Can the local labor force participate?

Waste

Waste – in particular the siting of landfills, incinerators, and other waste transfer or processing facilities – has long been part of the environmental justice discourse. Siting decisions for recycling and waste-to-energy facilities and truck depots will continue to play a role in equitable city climate policy. Cities can go further than this by reducing emissions (both GHG and local air pollution) from waste hauling trucks, offering equitable access to community composting programs, and ensuring that waste workers are treated fairly. New York City's 2006 Solid Waste Management Plan, for example, was aimed at reducing solid waste transport by trucking in favor of rail and marine transfer, and to siting transfer stations in an equitable way.⁶⁶

Land use

This guide would be incomplete without acknowledging the racist history and present of land use law in the United States, which has facilitated and in many instances effectively required the racial segregation of neighborhoods across the country. As local governments revise their zoning requirements to reduce GHGs, they should be attuned to how these zoning changes can remedy or perpetuate longstanding patterns of racial inequity. In recent years, some cities have implemented zoning changes that address both climate and equity. Minneapolis, for example, eliminated single-family zoning city-wide.⁶⁷ Single-family zoning was, in many places, a tool used for excluding people of color; single-family zoned neighborhoods also generally require more driving and larger living spaces, both of which generate GHGs. Somerville, Massachusetts updated its zoning code to include a number of climate-friendly measures, including to allow accessory dwelling units (ADUs).⁶⁸ If property owners take advantage of this opportunity and include an ADU on their property, housing stock increases and, ideally, some of this new housing is relatively more affordable.

Cross-sector

Though the interplay between climate impacts, climate policy, and underrepresented groups – including BIPOC and low-income households – is becoming increasingly well-understood, efforts to remedy disparities in climate impact can face legal hurdles. In particular, many facets of U.S. law and policy have been tailored over time to favor a “race-neutral” approach, which can prohibit taking race into account in law, policy or decision-making. This means that policies aimed at improving outcomes for residents more severely impacted by climate change – which in many places are largely BIPOC residents – could have to follow criteria that are facially race-neutral but that imperfectly target the communities most in need, or may need to expend extra resources to demonstrate a compelling governmental interest and to develop a narrowly tailored policy response, pursuant to the Fourteenth Amendment Equal Protection case law.

66 City of New York, *Solid Waste Management Plan*, NYC SANITATION, <https://www1.nyc.gov/assets/dsny/site/resources/reports/solid-waste-management-plan> (last visited Oct. 5, 2021).

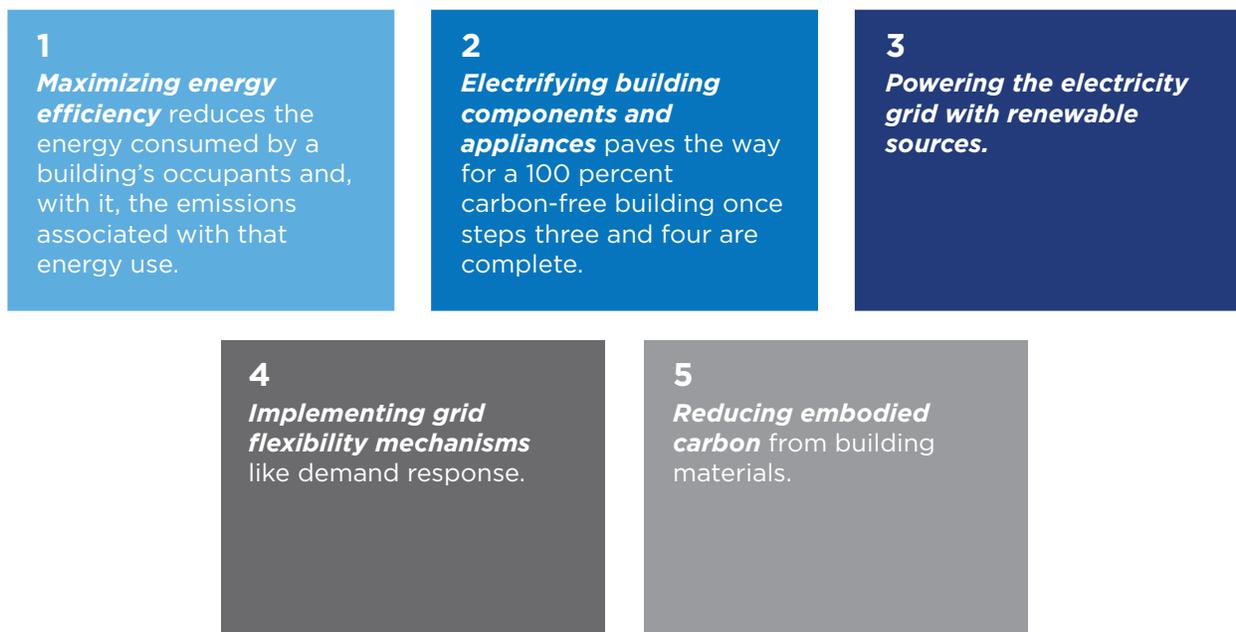
67 CITY OF MINNEAPOLIS DEP'T OF CMTY PLAN. AND ECON. DEV., MINNEAPOLIS 2040 PLAN 105-106 (2020).

68 City of Somerville, Ma., Ordinance 96 (Dec. 12, 2019).

4. BUILDINGS

A city's buildings are either the number one or number two driver of its greenhouse gas emissions (joined in the top two by transportation GHGs),⁶⁹ making it essential to reduce these emissions as part of a city's overall GHG reduction strategy. Controls on building emissions also reduce local air pollutants, making a city's buildings healthier places to live and work.

Five broad strategies underscore building decarbonization:



Of course, these “steps” can and should be undertaken concurrently, both in policy design and in building and infrastructure upgrades. This chapter looks at legal considerations associated with steps one and two – energy efficiency and electrification for new and existing buildings – and briefly at step five. Chapter 6 examines city legal tools relating to renewable energy generation.

⁶⁹ See *Greenhouse Gas Emissions Interactive Dashboard*, C40 CITIES, https://www.c40knowledgehub.org/s/article/C40-cities-greenhouse-gas-emissions-interactive-dashboard?language=en_US (last visited Jan. 16, 2021).

A Note on Equity

Building decarbonization policy is deeply intertwined with questions of equity. For one, building policies have the potential to exacerbate historic and ongoing practices of racial exclusion like redlining, particularly if the benefits of building retrofits like improved air quality and thermal comfort accrue disproportionately to wealthier, whiter neighborhoods. Furthermore, buildings that are constructed or retrofitted to be energy efficient or use low-emitting, electric building systems can improve affordable housing stock, but also risk causing “green gentrification,” which pushes out low-income residents in favor of those who will pay for newer, greener building and neighborhood features. Stakeholder engagement is critical to understanding the potential impacts of building decarbonization policies on frontline communities and how to tailor policies to benefit low-income and minority residents.⁷⁰

Where does local authority to regulate buildings come from?

While local building requirements can give rise to various legal questions regarding the potential for state and federal preemption, cities’ authority to regulate with respect to buildings is relatively clear. Building regulation, as a closely-related area to land use regulation, is generally considered part of the police power; that is, the broad type of authority left to the states by the Tenth Amendment of the U.S. Constitution to regulate with respect to the general health and welfare. Many states – through their municipal home rule provisions, a specific grant of police power authority, or both – delegate to municipalities the authority to regulate with respect to health, safety, and other welfare matters.

Because local governments enjoy only the authority delegated to them by their states, preemption by state law can impede a city’s ability to exercise the police power, as where a statewide building code preempts local construction requirements. But beyond the potential for state preemption, limits on the police power are relatively few. They include constitutional protections like equal protection, procedural due process, and substantive due process, and therefore “generally prohibit only irrational or arbitrary regulations, unusual procedural flaws, or actions that discriminate in especially offensive ways.”⁷¹

New Building Policies: Building Codes

New construction offers an opportunity to incorporate climate-friendly building features from the start, a less costly undertaking than retrofiting later. The most common legal tool to limit

70 For a deeper dive, see JEREMY HAYS ET AL., EQUITY AND BUILDINGS: A PRACTICAL FRAMEWORK FOR LOCAL GOVERNMENT DECISION MAKERS 1, (Urb. Sustainability Dirs. Network eds., June 2021).

71 Carl J. Circo, *Using Mandates and Incentives to Promote Sustainable Construction and Green Building Projects in the Private Sector: A Call for More State Land Use Policy Initiatives*, 112 PENN. ST. L. REV. 731, 744-45, 749 (2008).

emissions and energy use from new buildings is the building code. Building code provisions aimed at GHG reductions include solar-readiness; electric-readiness; all-electric or electric- or heat pump-incentivized; and other requirements relating to building envelope, water heating, lighting, plug load, transformers, and more.

As used throughout this section, “**building code**” refers broadly to a range of construction requirements that are codified in a building code, an energy or energy conservation code, plumbing codes, or other codes – each of which might apply to residential, commercial, or some other subset of buildings – that set standards for building construction or for major renovations. Statewide codes are often based on two model codes, the International Energy Conservation Code (IECC) and the ANSI/ASHRAE/IES Standard 90.1, both of which are updated periodically.

Statewide building codes and preemption of local construction requirements

Building code authority is held by the states, and only some states delegate it to local governments. Local governments without code authority will lack authority to pass, or face heightened preemption scrutiny for, local building code and other construction requirements. Even where cities *do* have some building code authority, using it may require meeting burdensome requirements. In New York, for example, local amendment of the building code requires a showing of “special conditions prevailing within” the locality (amendment of local building energy codes does not).⁷² In some instances, local governments have engaged with code development processes at the state level or through independent groups like the International Code Council due to their lack of direct authority to promulgate local building codes.

Stretch codes: In states with statewide building codes and no opportunity to amend locally, municipalities and residents could advocate for the statewide adoption of a “**stretch code**,” a code that is more stringent than the statewide base building code that municipalities may adopt if they wish. Massachusetts, Vermont, and New York all have stretch codes.⁷³

Federal preemption of local appliance energy efficiency standards by EPCA

The Energy Policy and Conservation Act (EPCA) sets energy and water efficiency standards for “covered” residential, commercial, and industrial appliances, among them major building systems like furnaces, HVAC systems, and water heaters.⁷⁴ EPCA expressly preempts state and local governments from regulating the energy efficiency or energy use of covered appliances.⁷⁵ Three notable exceptions to EPCA preemption apply to local governments: (1) procurement

72 N.Y. EXEC. L. § 379 (2020); N.Y. ENERGY L. § 11-109 (2011).

73 780 MASS. CODE REGS. 115 (2018); VT. STAT. ANN. 30, § 51 (2020); N.Y. ENERGY L. § C402.1-C503.5.1. (2019).

74 42 U.S.C. §§ 6201-6552 (1975).

75 42 U.S.C. § 6297(b).

requirements can be more stringent than federal standards;⁷⁶ (2) subject to state law, local governments may set efficiency standards for products without EPCA standards (e.g., computers and computer monitors);⁷⁷ and (3) local governments with building code authority can take advantage of a building code exception to EPCA preemption (discussed next).⁷⁸

The building code exception to EPCA preemption

Building code requirements may include energy efficiency or energy use standards for EPCA-covered appliances if the codes meet certain statutory conditions, including that the code (1) “permits a builder to... select[] items whose combined energy efficiency” meet an overall building energy target; (2) does not specifically require any covered appliances that exceed federal standards; (3) offers options for compliance on a “one-for-one equivalent energy use or equivalent cost basis”; and (4) frames any energy target as a total for the building.⁷⁹ In essence, this means that local building codes *can* (if allowed by state law) set energy standards for appliances that have EPCA standards, but they cannot effectively require use of appliances that exceed federal standards. Building codes must offer options to use appliances that pass muster under EPCA, and must base the options on a defensible “one-for-one” basis.

Two cases sketch the contours of the building code exception to EPCA preemption:

- ***Air Conditioning, Heating & Refrigeration Institute v. City of Albuquerque*** examined Albuquerque, New Mexico’s 2007 code, which offered performance and prescriptive options for compliance. The performance-based options effectively required the installation of appliances that exceeded federal standards, but the prescriptive pathways did not. Even though the Albuquerque code gave builders options for compliance, the federal district court held that the code effectively imposed “a penalty... for selecting products that meet, but do not exceed, federal energy standards,” thus “effectively requir[ing] the installation of products that exceed” EPCA standards.⁸⁰ A federal district court in New Mexico held Albuquerque’s code preempted.
- In ***Building Industry Ass’n of Washington v. Washington State Building Code Council***, the United States Court of Appeals for the Ninth Circuit considered Washington’s 2009 statewide building code. That code allowed for three compliance pathways, two of which would require builders to earn one “credit” for additional energy conservation measures; these credits could be earned, among other ways, by installing better-than-EPCA appliances. Though the approach of offering multiple compliance options was in some ways similar to Albuquerque’s code, the court held Washington’s code not preempted by EPCA. The court wrote that the Washington code did “not create any penalty or legal compulsion to use higher efficiency products.”⁸¹

76 42 U.S.C. § 6297(e).

77 PETER ROSS, APPLIANCE & EQUIPMENT EFFICIENCY STANDARDS: A ROADMAP FOR STATE & LOCAL ACTION 22-23, (Sabin Ctr. for Climate Change L. eds., 2017).

78 42 U.S.C. § 6297(f).

79 42 U.S.C. § 6297(f)(3).

80 *Air Conditioning, Heating and Refrigeration Inst. v. City of Albuquerque*, 2008 WL 5586316 at *9 (D.N.M. 2008).

81 *Bldg. Indus. Ass’n of Wash. v. Wash. State Bldg. Code Council*, 683 F.3d 1144, 1149 (9th Cir. 2011).

The Ninth Circuit and the district court in New Mexico agreed that a building code may not force the use of appliances exceeding EPCA standards. Code requirements aiming to increase the uptake of better-than-EPCA appliances (including electric appliances) should therefore offer a range of compliance options on an approximate one-to-one energy conservation equivalency.

New Building Policies: All-Electric Construction

An **all-electric construction** policy is a measure or measures aimed at prohibiting or disincentivizing natural gas connections to newly constructed or significantly renovated buildings. At times, the term “**natural gas ban**” is used as a catchall to include both express prohibitions on new natural gas hookups and local building code requirements that compel or incentivize all-electric construction. All-electric construction is the functional equivalent of a natural gas ban; if a building’s furnace and other appliances are powered by electricity, then a gas connection is not needed or useful.

Identifying a source of local authority

Local governments generally cite one of three sources of legal authority in promulgating all-electric construction requirements or incentives or building natural gas restrictions. First, some municipalities have successfully used their **local building codes** to enact all-electric or electric-incentivized requirements, including more than 40 in California alone.⁸² New York City proposed legislation in 2021 that would amend the building code to limit carbon emissions from new buildings, a novel iteration of the use of a building code to drive building electrification. Second, some municipalities have cited their **municipal home rule authority or police powers** to prohibit gas hookups to new buildings (with some exceptions). Results have been mixed: San Jose, California’s ban went without legal challenge;⁸³ Brookline, Massachusetts’s was disapproved by the state’s attorney general;⁸⁴ and Berkeley, California’s has been the subject of litigation.⁸⁵ Brookline, MA invoked a third source of authority, its **zoning authority**, in proposing two local laws that would offer incentives for fossil fuel-free construction.⁸⁶

Preemption by state law

Three main grounds for state law preemption of local building natural gas restrictions and/or all-electric construction requirements have emerged:

Express, statewide preemption: Several states, including Arizona, Louisiana, and Oklahoma, among others, have enacted legislation prohibiting local requirements that restrict natural gas

82 Matt Gough, *California’s Cities Lead the Way to a Gas-Free Future*, SIERRA CLUB (July 22, 2021), <https://www.sierraclub.org/articles/2021/07/californias-cities-lead-way-gas-free-future>. Seattle also requires all-electric construction for some buildings through its building code. See SEATTLE, WA. CODE § C401 (2015).

83 SAN JOSE, CAL., CODE ch. 17.845 (2020).

84 Letter from Maura Healy, Attorney General, Commonwealth of Mass. to Patrick J. Ward, Brookline Town Clerk (July 21, 2020) (on file with author).

85 Cal. Restaurant Ass’n v. City of Berkeley, No. 4:19-cv-07668 (N.D. Cal. July 6, 2019).

86 Brookline, Mass: Warrant Arts. 25 & 26 (2021).

connections to buildings.⁸⁷ More precisely, these state preemption laws prohibit local building requirements that vary based on the type of utility that serves a building. Despite their facial neutrality, these laws are aimed at local restrictions on gas use in buildings.

Preemption by statewide building codes: Local governments without building code authority are not only unable to amend their codes to require all-electric construction, they would also face heightened scrutiny that the statewide building code preempts *other* kinds of construction or construction-adjacent requirements. In Massachusetts, for example, the town of Brookline’s initial natural gas prohibition – which was not codified in a building code – was struck down by the state’s attorney general, in part because she determined it was preempted by the state building code.⁸⁸

Preemption by state public service laws: Some argue that statewide public service laws are intended to occupy the entire field of utility regulation, thereby preempting all local prohibitions on gas connections in buildings. The Massachusetts attorney general made this finding in striking down Brookline’s ban. Others argue that a state utility’s “obligation to serve” guarantees provision of gas.⁸⁹ On the other hand, an argument can be made that a gas hookup is part of a building and thus should not be preempted by a public utility regulatory regime aimed at the sale and distribution of gas.

Federal preemption

As discussed above, EPCA preempts state and local energy standards for covered appliances.⁹⁰ For municipalities with building code authority, the exception to EPCA preemption for building codes would apply to any all-electric or electric-incentivized code, so long as all statutory conditions are met. For building electrification measures or natural gas bans that are not codified in a building code, a 2021 decision from the U.S. District Court in the Northern District of California held that Berkeley, California’s natural gas ban was not preempted by EPCA.⁹¹ The court rejected the argument that EPCA preempted requirements that did “not facially address” energy conservation or energy use standards, “let alone mandate or require any particular energy use of a covered product.”⁹² The court further stated that a prohibition on natural gas infrastructure in new buildings “is clearly outside the preemption provision of the EPCA.”⁹³ The plaintiff in that litigation has appealed to the Ninth Circuit.⁹⁴

Other legal considerations

Utility franchise agreements. It has been argued in at least one instance that a city-utility franchise agreement grants an implied monopoly to a gas utility, and that a natural gas ban

87 Ariz. H.B. 2686, 54th Reg. Sess., (Ariz. 2020); S.B. 492, 2020 Reg. Sess. (La. 2020); H.B. 3619, 2020 Reg. Sess. (Okla. 2020).

88 Letter from Commonwealth, *supra* note 84.

89 See, e.g., N.Y. PUB. SERV. L. § 30 (2003).

90 42 U.S.C. § 6297(b).

91 Order Granting in Part and Denying in Part Motion to Dismiss at *10, Cal. Restaurant Ass’n v. City of Berkeley, No. 4:19-cv-07668, 2021 WL 2808975 (N.D. Cal. Jul. 6, 2021).

92 *Id.* at *15.

93 *Id.*

94 Cal. Restaurant Ass’n v. City of Berkeley, No. 4:19-cv-07668, 2021 WL 2808975 (9th Cir. filed Aug. 5, 2021).

would impermissibly impede that monopoly by inhibiting growth in the utility’s customer base.⁹⁵ Local franchise agreements should be reviewed to determine whether any terms conflict with potential natural gas restrictions.

Environmental review requirements. Homebuilders in California sued the municipalities of Windsor and Santa Rosa, contending that the local governments did not sufficiently take the environmental impacts of their all-electric codes into account.⁹⁶ Specifically, the homebuilders’ argument alleges that increased wildfire risk was not properly considered. Windsor dropped its all-electric code rather than litigate,⁹⁷ but a court allowed Santa Rosa’s code to stand (the homebuilder in that case has filed a notice of appeal).⁹⁸

Other Approaches to Reducing New Building Emissions

Land use/zoning authority

Preemption by state building codes: Many cities have zoning provisions aimed at building sustainability. These include requirements for solar panels or green roofs; revisions to setback requirements to allow for exterior building insulation or outdoor appliances like heat pumps; requirements that buildings achieve LEED or other third-party building standards; and incentives like density or FAR bonuses, fee waivers, or special permits for climate-friendly building.⁹⁹ While state law may draw boundaries between requirements appropriate for building codes versus those that can go in zoning codes,¹⁰⁰ in practice the line is blurry. Cities should take care that zoning rules do not encroach on the building code’s domain, risking preemption.

Zoning for building size or density: Traditional uses of zoning authority can also implicate building GHGs. By allowing for more multifamily zoning, a city can encourage shared residential buildings (and smaller living spaces) that consume less energy per resident. Allowing accessory dwelling units or “tiny houses” – one form of multifamily zoning – means that some residents will live in small homes that use little energy.¹⁰¹ Many zoning codes contain provisions that entrench single-family zoning practices and a high-GHG-per-resident carbon footprint. Some cities have eliminated single-family zoning for environmental, affordability, and equity reasons, but doing so can be a politically difficult task.

95 Letter from Alexandra Blackmore et al. to Maura Healey, Mass. Attorney General (Jan. 29, 2020) (on file with the Sabin Center) (opposing Brookline’s Warrant Article 21 claimed that it “directly interferes with the Gas Companies’ rights to exercise their franchise rights to sell gas...”).

96 Verified Petition for Writ of Mandate and Complaint for Declaratory and Injunctive Relief at 6, *Gallaher v. Town of Windsor*, No. SCV-265553 (Cal. Super. Ct. filed Nov 19, 2019); *Windsor Jensen Land Co. v. Town of Windsor*, No. SCV-265583 (Cal. Super. Ct. filed Nov 22, 2019); Petition for Writ of Mandate, *Gallaher v. City of Santa Rosa*, No. SCV-265711 (Cal. Super. Ct. filed Dec. 17, 2019).

97 Will Schmitt, *Windsor Poised To Repeal Natural Gas Ban Opposed by Developers*, PRESS DEMOCRAT (Dec. 1, 2020), <https://www.pressdemocrat.com/article/north-bay/windsor-poised-to-repeal-natural-gas-ban-opposed-by-developers/>.

98 Ruling on Petition for Writ of Mandate and Complaint for Declaratory and Injunctive Relief, *Gallaher*, No. SCV-265711 (Cal Super. Ct. filed Apr. 22, 2021); Notice of Appeal, *Gallaher*, No. SCV-265711 (Cal Super. Ct. filed June 21, 2021).

99 See, e.g., WATERTOWN, MASS., CODE art. VIII § 8.05 (1989); CAMBRIDGE, MASS. CODE ART. 22.000 (2019); MIAMI BEACH, FLA. CODE § 3.13 (2010) & 133-3; MINNEAPOLIS, MINN. CODE § 549.220(12) (2016).

100 See, e.g., MASS. GEN. L. ch. 40A § 3 (2017).

101 See, e.g., CITY OF SPUR, TEX. CODE § 667 (2016); ANN ARBOR, MICH. CODE § 5:10.2 4(D) (2021); SOMERVILLE, MASS. CODE ch. 3 (2019).

Requiring third-party certification (e.g., LEED) for new buildings

Some cities mandate or incentivize construction certified by third party standards like the Leadership in Energy and Environmental Design (LEED) standard. These requirements can be codified in local zoning or building codes, and many avoid legal scrutiny. However, they can give rise to questions under the *nondelegation doctrine* by (1) delegating building permitting decisions to a third party (i.e., the building standards entity) and (2) putting the city in a position where the underlying third-party standard – and therefore the zoning or building code – is updated without any legislative or regulatory process. In practice, non-delegation concerns can be drafted around, with codes that allow some continued city involvement in setting building requirements. For example, some offer LEED as an optional compliance pathway or adopt a current LEED standard as their own, without allowing for automatic updates without legislative review. Others require that new buildings be LEED-certifiable rather than -certified, leaving permitting determinations to local officials.¹⁰²

Building waste & embodied carbon

Many building materials are carbon-intensive, particularly steel, iron, and concrete,¹⁰³ and some features meant to reduce a building's operational emissions use materials that drastically increase the GHGs attributable to the construction of the building. Frameworks for regulating the embodied carbon in building materials are in the early stages. Potential areas of leverage that cities might rely on include zoning and land use authority, building code or other building regulatory authority, procurement practices, waste reduction projects, and taxes, fees, and incentives.¹⁰⁴ Cities without building code authority, for example, would likely face hurdles to some embodied carbon policies. State law limitations on taxes and fees could also limit some local action on embodied carbon, as could procurement requirements that strongly emphasize cost over environmental or other benefits. A full assessment of the legal frameworks applicable to local embodied carbon policy in the U.S. has not yet developed, and this is an area for city law and policymakers to continue watching.

Existing Buildings: Benchmarking & Data

A different set of legal considerations arises with respect to existing buildings, which can often sidestep concerns about state building code preemption. Energy and emissions requirements for existing buildings are evolving, and many potential legal questions have not yet played out in litigation.

102 See, e.g., BOSTON, MASS. CODE art. 37 (2007); Washington, D.C., Green Building Act (2012).

103 *The 2030 Challenge for Embodied Carbon*, ARCHITECTURE 2030, https://architecture2030.org/2030_challenges/embodied/ (last visited Jan. 26, 2021).

104 See, e.g., CARBON NEUTRAL CITIES ALLIANCE ET AL., CITY POLICY FRAMEWORK FOR DRAMATICALLY REDUCING EMBODIED CARBON 8-9 (2020) (offering policy guidance to cities to reduce emissions from construction material).

Benchmarking requirements

A benchmarking law requires buildings, often those above a certain size, to provide energy or emissions data for comparison to other buildings of similar type, use, and size.¹⁰⁵ Benchmarking information can be used in the near term to identify opportunities to reduce GHGs or energy use and later to inform substantive requirements.¹⁰⁶ Benchmarking requirements for large buildings have generally not been the subject of legal challenge.

Energy use disclosure & audit requirements

Disclosure policies use a range of strategies beyond benchmarking and are more likely to apply to small and large buildings alike.¹⁰⁷ Some energy disclosure policies require the information be provided to potential buyers.¹⁰⁸ This may give purchasers (or, if applicable, potential renters) a chance to negotiate the price of a poor-performing building or choose among properties based on their energy use.¹⁰⁹ Some cities also require building energy audits, requiring a more intensive look at energy use.

Privacy & data security: Some advocates raise concerns about privacy in relation to collecting information on energy use at the individual residence level. The U.S. Court of Appeals for the Seventh Circuit considered claims relating to alleged privacy infringements by smart meters that collected home electricity use information every 15 minutes, holding that, while the data collected were “searches” for purposes of the Fourth Amendment of the U.S. Constitution, the city of Naperville, Illinois’ “significant government interests” (i.e., “the modernization of the electrical grid”) made the searches reasonable.¹¹⁰ The use of “smart” technologies can also give rise to cybersecurity concerns. Municipalities will need to comply with federal data privacy and protection laws, including the Electronic Communications Privacy Act and the Computer Fraud and Abuse Act,¹¹¹ and state law. Even if all applicable laws are followed, a city could still face claims in the event of a breach or misuse of data.

Collecting data from utility companies: Practically speaking, a simple way to manage building energy data collection may be to require that the electric or gas utility provide it directly to the local building department. Public utilities are largely regulated by the state, so requiring that a utility company turn over data may not be an option at the municipal level. Still, a local utility could be a partner in developing this sort of policy, helping to streamline the administrative burden of compliance by individual customers. Cities with municipally-owned utilities may have more latitude to direct their utilities to provide data.

105 *Building Energy Use Benchmarking*, U.S. DEP’T OF ENERGY OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY (last visited Jan. 29, 2021), <https://www.energy.gov/eere/slsc/building-energy-use-benchmarking>.

106 *Energy Benchmarking and Transparency Benefits*, INSTITUTE FOR MARKET TRANSFORMATION, <https://www.imt.org/resources/fact-sheet-energy-benchmarking-and-transparency-benefits/> (last visited Jan. 29, 2021).

107 See, e.g., Austin, Tex., Energy Conservation Audit and Disclosure Ordinance (2008).

108 MINNEAPOLIS, MINN. CODE § 248.75 (2019); PORTLAND, OR. CODE ch. 17.108 (2018).

109 See, e.g., PORTLAND, OR. BUREAU OF PLANNING AND SUSTAINABILITY, REPORT TO PORTLAND CITY COUNCIL ON RESIDENTIAL ENERGY PERF. RATING AND DISCLOSURE (ORDINANCE No. 188143) 4 (Oct. 2020).

110 *Naperville Smart Meter Awareness v. City of Naperville*, 900 F.3d 521, 528-29 (7th Cir. 2018); see also *Klein v. Met Ed*, 2020 WL 94077 (M.D. Pa. 2020).

111 18 U.S.C. §§ 2510-2523 (2002); 18 U.S.C. § 1030 (2020).

Building Performance Standards

Building performance standards are requirements that existing buildings meet a set metric of performance, such as a cap on energy use or GHG emissions. Performance standards can be contrasted with prescriptive requirements, which expressly specify measures to decrease energy use or GHG emissions, but do not assess the results of these measures. So far, there are only a handful of building performance standards in the U.S., and even fewer for which compliance periods have begun. Washington, D.C. will require buildings over 50,000 square feet to meet a minimum level of energy performance by 2026, with smaller buildings being brought into the law in the years that follow.¹¹² New York City’s Local Law 97 will require buildings over 25,000 square feet to comply with a cap on their carbon emissions based on their size and use categorization beginning in 2024.¹¹³ And St. Louis will require buildings over 50,000 square feet to meet an energy use intensity standard starting in 2025.¹¹⁴ In addition to these widely-applicable performance standards, another handful of cities have policies that can be considered building performance standards but that also offer prescriptive options for compliance, meaning that, in effect, for many buildings they act as prescriptive standards.¹¹⁵

State law preemption

Because of the variety in performance standard design – and the fifty-state multiplicity of jurisdictions – a number of state laws might preempt local building performance standards.

Statewide building codes: While statewide building codes often apply to new construction and significant renovations, this is not universal. Some statewide building codes include requirements for existing buildings that could preempt a local performance standard. Additionally, it is conceivable that a court could find that a requirement that facially applies only to existing buildings is a *de facto* construction requirement. To counter any potential concern about such a risk, a municipality might offer compliance with the current code as a prescriptive compliance pathway. This issue has not to date been litigated.

State air pollution control laws: States vary in the extent to which they retain authority over air pollution. Some states, like Michigan, allow local governments to enact air emissions requirements that are more stringent than state requirements.¹¹⁶ Others, like Virginia and Minnesota, preempt local air pollution control requirements.¹¹⁷ The scope of state air pollution preemption is an issue that warrants close attention.

State public utility laws: States retain authority over most aspects of energy utilities through both legislation and public utility commission regulations. In theory, there is a clear line separating oversight of energy generation and distribution under public service laws, on the one hand, and building energy use, on the other. In practice, however, state energy

112 Washington, D.C., Clean Energy DC Omnibus Amendment Act of 2018, D.C. Law 22-257 (2019).

113 NEW YORK, N.Y. LOCAL L. 97 § 651 (2019).

114 Board Bill No. 219, 2015-2016 Sess. (St. Louis, Mo. 2020).

115 *E.g.*, RENO, NEV. CODE § 14.30 (2019); BOULDER, CO. CODE ch. 2 § 2-1 (2010), also known as “SmartRegs.”

116 MICH. COMP. LAWS §§ 324.5542(1) (2000).

117 VA. CODE § 10.1-1321 (1972); MINN. STAT. § 116.07(2) (2020).

requirements can be wide-reaching and may conflict with building requirements.

Other laws relating to buildings: States may have laws and rules relating to building occupancy, safety, tenant protections, and more. These could include requirements relating to energy efficiency, insulation, fire prevention, ventilation, and other items that interplay with building decarbonization.

Small buildings

At present, most building performance standards apply only to large buildings – 10,000 square feet or larger. New legal questions will emerge as cities look to control the emissions or energy use of smaller buildings. Collecting emissions or energy use information from buildings could give rise to privacy concerns. Requirements for small or single-family buildings could also cause practical issues – how will single-family homeowners afford upgrades or navigate available options? – that will require careful consideration.

Equity: interplay with other existing laws

Building requirements can have equity implications such as the potential for increased rents, gentrification, and the displacement of residents, particularly in light of other applicable law. For example, New York City’s performance standard, Local Law 97, presented a potential conflict with state rent stabilization law, which could have allowed owners of rent-stabilized units to raise rents in order to recover the costs of the “major capital improvements” needed to comply with Local Law 97.¹¹⁸ The final law reflected this risk by excepting many buildings with rent-regulated units from the main compliance pathway, offering instead a list of prescriptive measures to establish compliance.¹¹⁹ Policymakers should consider and consult with stakeholders regarding how a building requirement might interplay with other applicable laws (considering that the co-benefits of building decarbonization – reduced local air pollution and upgraded housing stock, among others – are themselves components of an equitable building decarbonization strategy).

Triggers for Building Decarbonization Obligations

For policies that are not ongoing performance standards, a city may wish to phase in compliance dates over time. Several models exist for attaching building decarbonization obligations to triggers throughout a building’s lifecycle:

- Boulder’s rental efficiency standards (SmartRegs) apply to residential rental buildings and must be achieved before a building owner obtains a rental license.¹²⁰

118 N.Y. UNCONSOL. LAW Ch. 1974 § 6 (2002).

119 NEW YORK, N.Y. CODE §§ 28.320-28.321(2019) (adding a new Art. 321 to the N.Y. City Admin. Code).

120 For more, see ALISA PETERSON & RADHIKA LALIT, BETTER RENTALS, BETTER CITY 4 (Rocky Mountain Inst. eds., 2018).

- San Francisco’s Residential Energy Conservation Ordinance applies before a building’s sale, requiring an inspection and potential upgrades (it triggers only once per building and the standard is now quite outdated).¹²¹ Austin’s Energy Conservation and Disclosure Ordinance has triggers for both sales and rentals.¹²²
- A city might also consider periodic requirements, like inspections or upgrades every five or ten years – enough to drive decarbonization but not so often as to overburden smaller building owners.

Other Prescriptive Building Requirements

Prescriptive building requirements – anything from retrocommissioning to green and cool roof requirements – can face the same legal questions and obstacles as performance standards. They may conflict with, and be preempted by, state or federal law. Certain forms of prescriptive requirement may not be authorized under state law, and accountability measures such as penalties will need to be tailored to applicable state law frameworks.

Fees, Taxes, and Penalties

Fees or penalties for noncompliant buildings must be consistent with a city’s state-delegated authority to assess fees, taxes, and penalties. As a general matter, many local governments have the authority to impose **fees**. Fees, however, can be an imperfect policy fit. Some municipalities have authority to impose **impact fees**, which require new development to pay for the infrastructure that will be needed to serve it. Impact fees hold some promise for new buildings, but not all states authorize them. **Taxes**, on the other hand, do not require that the payer receive any specific benefit, but many states do not delegate unlimited taxation authority to local governments. The legal risk is that a city might impose what is intended to be a fee on carbon or energy use in buildings, only to have a court deem the charge a tax for which it lacks authority. As a third option, a local government might consider a **penalty** on excess building GHGs or energy use. States frequently delegate authority to municipalities to assess penalties, but the details vary. Because state law definitions of both fees and penalties often impose guardrails relating to reasonableness and a non-revenue purpose, a good practice is to study the costs or damages associated with noncompliance to set a fee or penalty that is defensible. Cities looking to tax building energy use or GHGs may need state authorization.

Other Decarbonization Policies for Existing Buildings

Decarbonizing municipally-owned and -operated buildings. Cities are within their legal authority to act as market participants in reducing city-owned building GHG emissions. Pledges to electrify or retrofit city buildings or power them with renewables avoid many of the thorny legal questions that can arise in decarbonizing private buildings, while also proving the market for green building products and services.

¹²¹ SAN FRANCISCO, CAL. CODE CHS. 12 & 12A (1991).

¹²² AUSTIN, TEX. CODE § 6-7-2 (2021).

Property Assessed Clean Energy (PACE) financing. PACE financing offers often-low interest loans for energy conservation and/or renewable energy retrofits to existing private buildings. PACE loans tie to the property itself, rather than the borrower, and loans are repaid as a line item on property tax bills. Loans can stay in effect after a sale of the property, such that sequential owners share in the cost of building improvements, and longer repayment timelines make it more likely that energy savings will free up cash to pay down the loan. PACE financing generally must be authorized by state law, pursuant to which local governments can enact it by creating “districts” through which property owners opt into the program.¹²³ As applied to single-family homes, PACE has been argued to undermine equity and housing stability, as it can saddle low- or middle-income homeowners with significant debt that is secured with a lien on their homes. Los Angeles County discontinued its residential PACE program in 2020 after facing lawsuits alleging the county had not properly overseen predatory PACE lenders.¹²⁴ Some cities may choose to limit PACE financing to commercial properties (often called commercial PACE, or C-PACE).

Closing market and knowledge gaps with legal tools. Building decarbonization can be complicated by market failures that leave no party with the incentive to retrofit a building. One such gap is the so-called “*split incentive problem*,” in which a landlord generally has more ability to retrofit a building to conserve energy, but the cost savings will largely be passed along to tenants. Legal tools are developing to help address the split incentive problem, including “green” or “energy-aligned” leases that better allocate incentives between landlord and tenant to invest in energy retrofits and share in energy bill savings.¹²⁵ These agreements are entered into by private parties – not the government – but cities can help develop template lease language and solicit stakeholder input about how to improve the landlord-tenant relationship.

Conclusion

Cities are well-positioned to regulate building GHG emissions within their borders, but the specifics of their policy reach depend on a local government’s grant of authority from the state. In regulating new buildings, cities without building code authority will be limited in their ability to set construction requirements. When setting policy for existing buildings, cities will need to assess their various grants of authority from the state – whether through a home rule law, delegation of police powers or a more targeted authority to govern with respect to air quality, health, safety, building occupancy, or another matter. The range of legal tools available offers a variety of strategies for decarbonizing the sector.

123 Kyle Massner, *Property Assessed Clean Energy Program* in SUSTAINABLE DEVELOPMENT CODE: CLIMATE CHANGE 84 (Jonathan Rosenbloom ed., 2020).

124 Andrew Khouri, *L.A. County Ends Controversial PACE Home Improvement Loan Program*, L.A. TIMES (May 21, 2020), <https://www.latimes.com/homeless-housing/story/2020-05-21/la-fi-pace-home-improvement-loans-la-county>.

125 ANDREW FEIERMAN, WHAT’S IN A GREEN LEASE: MEASURING THE POTENTIAL IMPACT OF GREEN LEASES IN THE U.S. OFFICE SECTOR 19 (Instit. for Mkt. Transformation ed., 2015).

5. TRANSPORTATION

Transportation accounts for 29 percent of all GHG emissions in the U.S.,¹²⁶ and for the largest share of GHGs in many cities.¹²⁷ Reducing transportation emissions is thus a critical component of any city's climate action plan. Moreover, measures that reduce GHG emissions from vehicles also reduce tailpipe pollutants like nitrogen oxides, sulfur dioxide, and particulate matter, which have significant negative health impacts, especially for those who live in heavily polluted areas.¹²⁸ Some transportation policies also bring about added benefits like revitalized downtown areas and safer and more pleasant streets for pedestrians.

This chapter looks at three interrelated approaches to reducing a city's transportation GHGs:¹²⁹

1

Scaling up electric vehicle (EV) adoption.

2

Limiting traffic in the center city through congestion pricing and restrictions on where vehicles can drive, as with a low emissions zone (LEZ).

3

Catalyzing mode shift from vehicles to more sustainable forms of travel.

Limiting traffic and catalyzing mode shift are both means of reducing vehicle miles traveled, or VMT. Reducing VMT and increasing EV adoption are complementary: reducing transportation GHGs to the level needed to achieve city GHG targets requires both drastically reducing vehicle trips and ensuring that still-needed vehicle trips are made in electric vehicles.

126 *Sources of Greenhouse Gas Emissions*, U.S. ENV'T'L PROT. AGENCY, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> (last visited Oct. 6, 2019). Data is for 2019.

127 See self-reported GHG data by sector and subsector of North American member cities of C40 Cities at *Greenhouse Gas Emissions Interactive Dashboard*, C40 CITIES, https://www.c40knowledgehub.org/s/article/C40-cities-greenhouse-gas-emissions-interactive-dashboard?language=en_US (last visited Jan. 16, 2021).

128 See SUSAN ANENBERG ET AL., A GLOBAL SNAPSHOT OF THE AIR POLLUTION-RELATED HEALTH IMPACTS OF TRANSPORTATION SECTOR EMISSIONS IN 2010 AND 2015 i-iii, (Int'l Council on Clean Transp. eds., 2019).

129 See *generally* PETER PLASTRIK & JOHN CLEVELAND, GAME CHANGERS: BOLD ACTIONS BY CITIES TO ACCELERATE PROGRESS TOWARD CARBON NEUTRALITY 30, 39 (Michael Shank & Johanna Partin eds., 2018).

A Note on Equity

Policies aimed at reducing transportation GHGs have the potential to remake neighborhoods, and to either address or perpetuate inequities like exposure to local air pollution and diminished access to transit. Choices relating to where to deploy EVs, site charging stations, expand transit, and build cycling and pedestrian infrastructure can help create a more equitable city that limits the burden of pollution on low income communities and communities of color and enhances economic opportunity. They can also do the opposite.

It is essential to offer opportunities for input from a wide array of stakeholders. In some cases, the law will require this sort of public input. Even where it does not, city laws and programs aimed at reducing GHGs increasingly include opportunities for public participation through working groups and advisory boards and other mechanisms.¹³⁰ This approach would be particularly useful in the transportation space, where impacts can unduly burden neighborhoods already affected by environmental injustices.

Federal Transportation Law: The Basics

One basic concept underlies local transportation policymaking: significant parts of U.S. transportation policy are set at the federal level, including national standards that govern air emissions from motor vehicle engines and required vehicle fuel economy. This limits the ability of cities to set policy relating to vehicles, particularly any sort of engine or emissions standards.

Federal preemption of vehicle requirements

The U.S. Energy Policy & Conservation Act (“EPCA”) and Clean Air Act (“CAA”) restrict local governments from setting fuel economy or air emissions standards for vehicles. EPCA expressly preempts any state or local “law or regulation related to fuel economy standards or average fuel economy standards for automobiles,”¹³¹ and more than one federal court has held that state and local laws requiring that classes of vehicles like taxis or trucks be hybrids or use other clean engine technology are preempted by EPCA.¹³² The CAA preempts “any [state or local] standard relating to the control of emissions from new motor vehicles or new motor vehicle engines,”¹³³ and the U.S. Supreme Court has held this language to preempt a local requirement that private fleet operators purchase low emissions vehicles.¹³⁴

130 See, e.g., Memorandum of Understanding between City of Minneapolis, Minn., Northern States Power Co. d/b/a Xcel Energy and CenterPoint Energy (2014) <https://mplscleanenergypartnership.org/wp-content/uploads/2015/02/xcel-mou-attach-b.pdf>; Memorandum of Understanding between City of Minneapolis, Minn., and CenterPoint Energy (2014), <https://mplscleanenergypartnership.org/wp-content/uploads/2014/12/centerpoint-mou.pdf>; NEW YORK, N.Y. CODE § 28-320.2 (2019).

131 U.S. Energy Policy & Conservation Act § 509(a), 49 U.S.C. § 32919(a).

132 Metro. Taxicab Bd. of Trade v. City of New York, 615 F.3d 152, 157 (2d Cir. 2010), *cert. denied*, 562 U.S. 1264 (2011); Ophir v. City of Boston, 647 F.Supp. 2d 86, 94 (D. Mass. 2009).

133 Clean Air Act § 209, 42 U.S.C. § 7543(a).

134 Engine Mfrs. Ass’n v. South Coast Air Quality Mgmt. Dist., 541 U.S. 246, 255 (2004).

Mandates vs. incentives: It's clear that EPCA and the CAA preempt **mandates** based on vehicle fuel economy and air emissions standards, including standards that effectively require a hybrid engine technology. They also preempt **de facto mandates** – standards that are structured to look like incentives but work more like requirements. For example, the U.S. Court of Appeals for the Second Circuit held that a local pricing requirement differentiating between the amounts taxicab owners could charge to drivers leasing the taxis based on whether the taxi was a hybrid vehicle amounted to a “de facto mandate [for the taxi owners] to purchase hybrid vehicles” and was therefore preempted by EPCA.¹³⁵ True **incentives** aimed at increasing EV uptake, on the other hand, will not be preempted.¹³⁶ Courts have allowed programs that permit compressed natural gas (CNG) taxis to cut to the head of the pick-up line at the airport and that set aside a small number of taxi licenses for hybrid vehicles.¹³⁷

While this case law has not caught up to EV technology (it assesses hybrid and CNG engines), it is likely that standards effectively requiring vehicles to be electric would also be preempted under these lines of case law.

Dormant Commerce Clause

Transportation requirements – particularly those relating to new vehicles – must take care to avoid “discriminat[ing] against interstate commerce”¹³⁸ in contravention of the dormant Commerce Clause.¹³⁹ A law that significantly discriminates against interstate commerce, in purpose or in effect, will be considered *per se* invalid unless there is a non-protectionist purpose and no other less discriminatory means available to achieve the law's goal.¹⁴⁰ On the other hand, state and local laws that have only “incidental effects on interstate commerce” will be upheld where the “statute regulates even-handedly . . . [and] unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.”¹⁴¹ (This is called the “*Pike* balancing test.”)

In assessing laws and policies aimed at reducing transportation sector GHGs, cities will need to ensure that any impacts to interstate commerce are limited to “incidental effects,” and that the law or policy advances a valid local objective (like reducing local air pollution). A prohibition on vehicles registered in other cities or states would almost certainly violate the dormant Commerce Clause.

135 Metro. Taxicab Bd. of Trade v. City of New York, 633 F.Supp 2d 83, 92 (S.D.N.Y. 2009).

136 Ass'n of Taxicab Operators U.S.A. v. City of Dallas, 720 F.3d 534, 541 (5th Cir. 2013).

137 *Id.*; Green All. Taxi Cab Ass'n. v. King Cnty., No. C08-1048RAJ, 2010 WL 2643369 (W.D. Wash. June 29, 2010).

138 Or. Waste Sys., Inc. v. Dep't. of Env't'l Quality of Or., 511 U.S. 93, 93 (1994) (using language about discriminating against interstate commerce throughout).

139 U.S. CONST. ART. I, § 8, cl. 3; Wyoming v. Oklahoma, 502 U.S. 437, 454 (1992).

140 Philadelphia v. New Jersey, 437 U.S. 617, 624 (1978).

141 Pike v. Bruce Church, Inc., 397 U.S. 137, 142 (1970).

Market participant exception

While cities are bound by federal law in acting as governing entities and regulators, they have far more latitude to act as direct market participants – that is, to spend their own money or use their own property. The “market participant exception,” has been applied to the dormant Commerce Clause, EPCA,¹⁴² CAA,¹⁴³ and the Federal Aviation Administration Authorization Act¹⁴⁴ to allow municipalities to make policy determinations that leverage their purchasing power. As the U.S. Court of Appeals for the Ninth Circuit put it: “[a]ctions taken by a state or its subdivision as a market participant are generally protected from federal preemption.”¹⁴⁵

Environmental review

The federal government and some states have environmental review statutes requiring municipalities to assess the environmental impacts of some of their actions. These environmental review requirements offer an easy legal “hook” that project or policy opponents can use to challenge an effort to reduce transportation emissions. A city’s careful adherence to all substantive and procedural requirements of these environmental review laws can help ensure an effort to build EV chargers, transform a city streetscape, or invest in public transit survives legal challenges based on environmental review requirements.

Legal Considerations for EV Expansion

Cities can play a catalyzing role in increasing EV adoption and building out a charging network. The tools available to cities vary depending on state law, and will raise legal questions for consideration by the city and other parties who have a stake in developing EV charging infrastructure.

Federal preemption and EV incentives

While cities may offer incentives for EV use, these incentives cannot be “so coercive as to indirectly mandate”¹⁴⁶ the purchase of EVs. Incentives for EV use could include allowing EVs to cut to the head of an airport pick-up line or setting aside licenses for electric taxis,¹⁴⁷ as well as the use of priority parking or express driving lanes. Salt Lake City, Utah offered free charging for a time.¹⁴⁸ A disincentive in the form of a new traffic or parking offense for vehicles parked in EV charging spots without using the charger could also be used. In many states, the authority to create a new traffic offense is retained at the state level.

142 EPCA includes an express market participant exception. See EPCA § 509(c), 49 U.S.C. § 32919(c) (“automobiles obtained for its own use”).

143 *Engine Mfrs. Ass’n v. South Coast Air Quality Mgmt. Dist.*, 498 F.3d 1031, 1040 (9th Cir. 2007) [Engine Mfrs. II].

144 *Tocher v. City of Santa Ana*, 219 F.3d 1040, 1049 (9th Cir. 2000); cf. *City of Columbus v. Ours Garage & Wrecker Serv., Inc.*, 536 U.S. 424, 431 (2002).

145 *Engine Mfrs. II*, *supra* note 143 at 1040.

146 *Ass’n of Taxicab Operators U.S.A. v. City of Dallas*, 720 F.3d 534, 541 (5th Cir. 2013).

147 *Id.*; *Green Alliance Taxi Cab Ass’n, Inc. v. King County*, No. C08-1048RAJ, 2010 WL 2643369 (W.D. Wash. June 29, 2010).

148 *Free EV Charging at Salt Lake City Level 2 Stations*, SLC GREEN BLOG (Feb. 27, 2018), <https://slcgreenblog.com/2018/02/27/free-charging/>.

State public utilities law can control

The longstanding stature of electric utilities as regulated monopolies has given rise to questions about how the direct sale of electricity to drivers should work, and there are nuances across state laws. In a majority of states, state law exempts EV chargers from the **definition of “public utility,”** allowing third parties to avoid being regulated as such,¹⁴⁹ but a few regulate owners of EV chargers as utilities.¹⁵⁰ State public utilities law will also control **whether a utility can earn a return** on its investments in EV charging infrastructure.¹⁵¹ California, for example, allows utilities to pass charging installation costs along to ratepayers, while Missouri, Michigan, and Kansas do not.¹⁵² In any plan to build out local charging infrastructure the local electric utility will likely need to be at the table to support wide-scale EV adoption.

Siting in the public right-of-way

In siting chargers on sidewalks or public roadway, cities need to (a) contract with the party (utility or otherwise) operating the charger and selling electricity to vehicle owners and (b) adhere to any street design or safety requirements. Cities looking to augment their charging networks with direct current (“DC”) rapid chargers will need larger locations in which to site them. Charging stations must comply with local land use designations, including public trust protections that may limit use of certain public property like park space. Pursuant to the Fifth Amendment of the U.S. Constitution and applicable state law, any taking of private property to site EV charging infrastructure will require just compensation to the property owner.

EV-charging and EV-readiness requirements

Building codes: Many cities aim to build out charging infrastructure by requiring that new buildings include EV chargers or be wired to install chargers relatively easily. Several local building codes now have EV charging or EV-readiness requirements, including in Seattle, Washington; Fort Collins, Colorado; and Sedona, Arizona.¹⁵³ Where states retain building code authority, cities will be preempted from enacting EV requirements in a local building code. Cities without code authority could seek to engage with state lawmakers to update the state-level code to include EV charging or to pass a stretch code.

Zoning codes: Zoning codes can catalyze EV charging in three main ways: (1) **direct requirements** that a new building or development include parking spaces with EV charging (for example, Salt Lake City’s zoning code requires one EV charging space for every 25 spaces in multi-family buildings);¹⁵⁴ (2) **density bonuses and other incentives** in exchange for EV charging; and (3) **clarification of zoning requirements** for EV charging stations.

149 See, e.g., *Elec. Investigation of Comm’n Jurisdiction Over Elec. Vehicle Charging Stations*, Case No. 2018-00372 (Kent. Publ. Serv. Commission 2008), https://psc.ky.gov/order_vault/Orders_2019/201800372_06142019.pdf.

150 Catherine Morehouse, *Should EV Charging Stations Be Regulated as Utilities? Kentucky Joins Majority in Saying No* UTILITY DIVE (Jun. 17, 2019), <https://www.utilitydive.com/news/should-ev-charging-stations-be-regulated-as-utilities-kentucky-joins-major/556972/>.

151 WASH. REV. CODE § 80.28.360 (2019); SB 19-077 § 2, 73rd Gen. Assemb. Reg. Sess. (Colo. 2019), amending COLO. REV. STAT. § 40-1-103.3(6).

152 Trip Pollard, *Transforming Transportation Demand*, in LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES 309 (Michael B. Gerrard & John C. Dernbach, eds., 2019).

153 SEATTLE, WASH. ORDINANCE 125815 (2019); FORT COLLINS, COLO. CODE § 5-30-E3401.5 (2019); AND SEDONA, ARIZ. CODE § 15.45.020 (2018).

154 SALT LAKE CITY, UTAH. CODE Ch. 21A.44.040.B (2019).

Chelan, Washington updated its code to clarify that small chargers are permitted in all zoning districts.¹⁵⁵ Atlanta, Georgia revised its code to define EV infrastructure as distinct from gas stations, which are subject to burdensome requirements.¹⁵⁶ In using any of these zoning tools, cities should seek to ensure that EV chargers are sited equitably.

Regional agreements

EV drivers may be limited by a lack of charging options in other municipalities (e.g., a commuter drives to work in a neighboring city). Cities could consider building a system of chargers across a metropolitan region. More than 40 states authorize some form of cooperation among localities, though some authorizations have limitations.¹⁵⁷ Frameworks for intergovernmental collaboration will continue to evolve, particularly in the handful of eastern states participating in the Transportation and Climate Initiative.¹⁵⁸

Municipal Fleets

There is little – from a legal perspective – stopping cities from investing in EVs for their own fleets. The market participant exception addresses preemption concerns, and a low emissions program or goal for a city’s municipal fleet would likely not run afoul of federal law.

Heavy-Duty Vehicles

While heavy-duty vehicle policy will mostly come from the federal government, cities can play a role through EV programs for buses and municipal trucks like waste haulers (see discussion of waste transport emissions in Chapter 7).¹⁵⁹ Policymakers should consider and solicit public feedback on the equity and environmental justice implications of *where* in a city EV and non-EV buses and trucks are routed, stored, and serviced.

School buses and V2G technology

A novel approach to scaling up distributed energy storage (covered in Chapter 6) is emerging among local governments considering using electric school bus batteries to store energy.¹⁶⁰ School buses represent a promising opportunity for vehicle-to-grid, or V2G, technology because they sit unused in the middle of the day and during the summer, two periods of peak energy demand. Local governments can help enable this technology by removing legal or permitting obstacles to charging and V2G infrastructure and by piloting electric school buses and other heavy-duty vehicles.

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- 155 CHELAN, WASH. CODE § 17.63 (2018); see also JONATHAN ROSENBLUM, REMARKABLE CITIES AND THE FIGHT AGAINST CLIMATE CHANGE: 43 RECOMMENDATIONS TO REDUCE GREENHOUSE GASES AND THE COMMUNITIES THAT ADOPTED THEM 80-83 (Env’tl L. Inst. eds., 2020).
- 156 ATLANTA, GA. CODE § 16-29.0019(56) (2014).
- 157 RICHARD BRIFFAULT & LAURIE REYNOLDS STATE AND LOCAL GOVERNMENT LAW 581 (8th ed. 2016).
- 158 See TRANSPORTATION & CLIMATE INITIATIVE, <https://www.transportationandclimate.org> (last visited June 22, 2021).
- 159 Andrea Hudson Campbell, Avi B. Zevin & Keturah A. Brown, *Heavy-Duty Vehicles and Freight* in LEGAL PATHWAYS TO DEEP DECARBONIZATION 422 (Michael B. Gerrard and John C. Dernbach, eds., 2019).
- 160 Joann Muller, *Electric School Buses Are Batteries For The Grid*, AXIOS (Jan. 10, 2020) <https://www.axios.com/electric-school-buses-vehicle-to-grid-power-19f7b6b1-662b-4501-a96e-dcf3fd57a886.html>.

Legal Considerations for Low Traffic Zones

Congestion pricing and low emissions zones (LEZs) offer two approaches to limiting VMT in a city center. As explained by the Carbon Neutral Cities Alliance, “car-free and low emission zones are ‘travel demand management’ approaches that use different tools – e.g., a ban and a price – to change driving behaviors” in a defined geographic zone.¹⁶¹ Congestion prices and LEZs give rise to similar legal questions.

Federal preemption

EPCA and the Clean Air Act: A key question in assessing a proposed LEZ or congestion pricing policy is whether a fee, ban, or other mechanism applicable on the basis of a fuel economy or air emissions standard is a mandate or *de facto* mandate (preempted by EPCA and the CAA) or an incentive (not preempted). What does the *de facto* mandate/incentive distinction mean for LEZs and congestion pricing? It is not entirely clear. Strategies like low emissions zones and congestion pricing should be able to employ incentives differentiating among vehicles based on engine technology. A city could credibly, and perhaps successfully, argue that congestion charges or LEZ entry fees based on engine type function as incentives. Nonmonetary incentives over which a city may (depending on state law) have authority include access to parking, charging stations, or priority loading zones within the zone.

The Federal Aviation Administration Authorization Act (“FAAAA”): The FAAAA also has the potential to preempt city LEZs: it preempts state and local laws relating to the “price, route or service of any motor carrier... with respect to the transportation of property.”¹⁶² While municipal policymakers should take care to tailor LEZ and congestion pricing policies to avoid FAAAA preemption, they may (depending on state law) set truck routes or other traffic restrictions based on vehicle weight.¹⁶³

Authority to toll

The question of where a municipality gets the authority to impose a toll must be answered at both the federal and state levels. Congestion charges on **any road considered a “federal-aid highway”** — that is, a road eligible for federal funding — will need to comply with U.S.C. Title 23 (Highways), and will require the approval of the Federal Highway Administration (“FHWA”). The FHWA can hold up project approval, as it did with New York City’s congestion pricing program.¹⁶⁴ A key gating item will be the successful completion of any review required under the National Environmental Policy Act (NEPA).¹⁶⁵ For congestion pricing not on federal-aid highways, **state law controls**. Some states, like Oregon,¹⁶⁶ generally allow municipalities to collect tolls on local roads. Others, like New York,¹⁶⁷ reserve toll-setting authority for the state.

161 Plastrik & Cleveland, *supra* note 129.

162 49 U.S.C. § 14501(c)(1).

163 49 U.S.C. § 14501(c)(2)(A).

164 Christina Goldbaum & Winnie Hu, *Could the Trump Administration Block Congestion Pricing in New York?* N.Y. TIMES (Feb. 25, 2020), <https://www.nytimes.com/2020/02/25/nyregion/-trump-congestion-pricing-nyc.html>.

165 42 U.S.C. §§ 4321-4370 (1970).

166 OR. REV. STAT. § 383.004(2) (2007).

167 N.Y. VEH. & TRAF. LAW § 1630 (2019).

State law can further limit how tolling revenues are spent.¹⁶⁸ A city considering a congestion pricing charge must review its state authorizing legislation to determine whether it can impose a congestion charge and how congestion pricing revenues can be used.

Closing a road.

Cities generally have clearer authority to close a road to vehicular traffic entirely than to enact some other restrictions, making road closures an important traffic reduction strategy. Municipalities often have broad, state-delegated authority to regulate street traffic, granted either expressly through state statute or impliedly as part of their police power. Courts in Connecticut, Idaho, and elsewhere have held that that city closures of streets to all but cyclists and pedestrians fall within applicable municipal authority, including to “advance economic, aesthetic and safety-related goals.”¹⁶⁹ Note, however, that roads within a municipality likely fall under some combination of federal, state, county, and local authority.

Privacy and data security

There are three broad ways in which privacy and data security can prove thorny for LEZs and congestion pricing. First, some states have laws governing the **cameras (automatic license plate readers or “ALPRs”)** used to monitor tolled roads and collect tolls electronically.¹⁷⁰ Some courts have held that a person’s location data compiled from cumulative ALPR readings implicates protected privacy interests.¹⁷¹ Second, **state laws** like California’s Consumer Privacy Act¹⁷² set more generally-applicable data protection requirements. Municipalities may need to work with state legislators to update state privacy laws to be sure tolling payment data is covered by these laws. Third, **on-board payment mechanisms** that track when a vehicle crosses the cordon or toll point using location (i.e., GPS) data may implicate drivers’ privacy interests. A few states have piloted road user charge programs (which collect mileage data) and developed a best practice for protecting privacy: allowing vehicle owners to choose their mileage reporting option.¹⁷³

Land Use Tools for Catalyzing Transportation Mode Shift

For reasons environmental, spatial, and equity-related, it’s not enough for a city to limit vehicle use and scale up EVs. Several legal tools within municipalities’ land use authority can make walking, cycling, and taking public transit more feasible and appealing:

Transit-oriented development: Transit-oriented development (TOD) involves planning higher density development with a range of residential and commercial uses within walking distance

168 *E.g.*, OR. CONST. art. IX, § 3a; N.C. GEN. STAT. § 136-89.188 (2018); WASH. REV. CODE § 47.56.830(3) (2008).

169 *Cohen v. City of Hartford*, 244 Conn. 206, 219 (Conn. 1998); *Christensen v. City of Pocatello*, 142 Idaho 132, 139 (Idaho 2005).

170 *See Automated License Plate Readers: State Statutes*, NAT’L CONF. STATE LEGIS., <https://www.ncsl.org/research/telecommunications-and-information-technology/state-statutes-regulating-the-use-of-automated-license-plate-readers-alpr-or-alpr-data.aspx> (last visited Mar. 15, 2019).

171 *See, e.g.*, *Neal v. Fairfax County Police Dep’t.*, 295 Va. 334, 346 (Va. 2018).

172 A.B. 375, 2017-2018 Leg. (Cal. 2018).

173 *See, e.g.*, COLO. DEP’T OF TRANSPORTATION, NO. CDOT-2017-11, COLORADO ROAD USAGE PROGRAM FINAL REPORT 52 (2017)

of a transit hub.¹⁷⁴ TOD zoning provisions often have incentives like reductions in the required parking minimums and floor area bonuses for providing pedestrian-oriented amenities like parks and retail space.¹⁷⁵

Parking requirements: Many zoning codes contain *parking minimums* – a required number of parking spaces, varied by development use and density, that must accompany new development. Cities can reduce parking minimums, thereby encouraging travel by other modes. Hartford, Connecticut and Flagstaff, Arizona have *parking maximums*, which “establish an upper bound for the number of spaces allowed for a specific use.”¹⁷⁶ A third alternative is requiring *parking in-lieu fees*, for which a developer pays into a fund for “large parking developments that serve an entire district.”¹⁷⁷

Conclusion

Cities have many tools to reduce transportation sector GHGs, even when accounting for significant federal and state law limitations. By incentivizing lower-GHG transportation options and planning for a city that is well-connected by transit, cycling and pedestrian infrastructure, and EV charging, cities prove central to reducing transportation emissions in a way that complements state and federal policy.

174 *Transit-Oriented Development*, FED. TRANSIT ADMIN., <https://www.transit.dot.gov/TOD> (last visited Oct. 7, 2021).

175 *E.g.*, CHICAGO, ILL. CODE §§ 17-3-0403-B; BLOOMINGTON, ILL. CODE § 19.29 (2018); see Rosenbloom *supra* note 155 at 109-10.

176 Rosenbloom *supra* note 155, at 157; see HARTFORD, CONN. CODE § 7.2.2(B)(2018); FLAGSTAFF, ARIZ. CODE § 10-50.80.040(C)(I) (2018).

177 Rosenbloom *supra* note 155, at 157; see, e.g., SCOTTSDALE, ARIZ. CODE App. B, § 9.108(D) (2018) and DANIA BEACH, FLA. CODE § 265-92 (2012).

6. ENERGY

Renewable energy will be essential to achieving the GHG reductions needed to reach cities' climate goals. Federal policy and state governments drive a lot of renewable energy policy, but local governments are flexing their ambition as well: more than 170 cities, towns, and counties have pledged to achieve a 100 percent renewable energy supply.¹⁷⁸ There are a number of tools cities can use to increase the share of renewable energy powering their communities at both the utility and distributed generation scales.

This chapter is positioned differently than the chapters on emissions from the buildings, transportation, and waste sectors. In those areas, cities have at least some legal authority – delegated by the state – to govern. The legal authority of municipalities with respect to energy use is more often an indirect effect of their status as consumer and large stakeholder, with some tangential regulatory authority (particularly land use authority to catalyze the growth of distributed generation).

For our purposes, municipalities are (1) **market participants** with some leverage that comes with large energy purchases (including through aggregation); (2) **regulators** with some peripheral authority over electric utilities, as through land use controls; and (3) large **stakeholders** in the electricity regulatory process. Most of the legal parameters that govern municipal options with respect to electricity and energy are set at the state and federal level, and therefore this chapter explores legal questions regarding cities' ability to scale up renewable energy by virtue of these three roles.

A Note on Equity

Decisions about how and where to develop renewable energy resources can give rise to significant questions about equity, energy justice, and reduction of local air pollutants. City policies to encourage distributed generation, for example, must be inclusive and offer meaningful opportunities for low and moderate income, minority, and other frontline communities to partake in the local benefits that phasing out dirty energy sources can bring.

Moreover, in some places in the U.S. energy costs can reach twenty percent (or more) of a low-income household's income.¹⁷⁹ Low-income energy customers should not be saddled with higher energy bills in the push to clean up the electricity supply, nor should city residents be

178 *Ready for 100*, SIERRA CLUB, <https://www.sierraclub.org/ready-for-100> (last visited April 30, 2021).

179 ARIEL DREHOBL & LAUREN ROSS, *LIFTING THE HIGH ENERGY BURDEN IN AMERICA'S LARGEST CITIES: HOW ENERGY EFFICIENCY CAN IMPROVE LOW INCOME & UNDERSTAND COMMUNITIES* 5 (2016).

left unable to access affordable air conditioning during hot summer months or heat during the winter. Low-income, minority, and environmental justice communities and other vulnerable populations should be prioritized in any energy cost savings resulting from connecting to cleaner energy sources. Finally, cities will need to make hard decisions about siting renewable energy projects and about whom they serve and what energy sources they displace. Environmental justice communities have long been more likely to have heavy-polluting power plants located nearby;¹⁸⁰ as communities develop renewable energy resources they should look to close fossil-fueled plants in low-income and minority neighborhoods. Lower carbon energy sources and appliances can also decrease local air pollution, a benefit that should be shared with vulnerable communities.

Utility-Scale and Distributed Renewable Energy Generation

Global energy demand is projected to rise approximately fifty percent between now and 2050,¹⁸¹ and essentially all of this energy will need to be carbon-free in order to meet our global and local GHG reduction goals. Utility-scale and distributed renewable energy generation are both critical, and complementary to one another. Cities have somewhat more established legal tools available to help encourage distributed renewable energy, though state-level and utility limitations can still hinder its development. New contractual tools are continually developing to help municipalities procure renewable energy at the utility scale, and cities also enter into these contracts pursuant to applicable regulatory limitations in their states.

- **Utility-Scale Electricity Generation:** Utility-scale generation (often defined as projects 10 megawatts (MW) and greater) brings in the bulk of the needed megawatts to power a city. The legal constraints on a city in procuring utility-scale renewable energy stem mostly from the state's regulatory regime and the utility's position as a monopoly power distributor.¹⁸² Cities (particularly those without municipally-owned utilities) will need to work with their local electric utility to procure power at the community-wide scale.
- **Distributed Energy Generation:** Distributed energy generation (projects smaller than 10 MW) yields energy at a smaller scale, but has other benefits for resiliency (in the event of utility power outages or power shortages), equity (if distributed resources and energy cost savings are shared with underserved communities), and reduction of localized co-pollutants. Distributed generation also offers the opportunity for meaningful community engagement and local, green jobs.

Electricity regulation is complicated, with wholesale generation and sales regulated at the

180 See, e.g., ADRIAN WILSON ET AL., COAL BLOODED: PUTTING PROFITS BEFORE PEOPLE 17 (Nat'l. Ass'n. for the Advancement of Colored People et al. eds., 2014).

181 U.S. ENERGY INFO. ADMIN., INTERNATIONAL ENERGY OUTLOOK 2019 28 (Sept. 24, 2019); see also Plastrik & Cleveland, *supra* note 129.

182 Heather House & Lacey Shaver, *Beyond Buying Renewables: How Cities Can Influence the Energy System*, ROCKY MOUNTAIN INST. BLOG (Jul. 27, 2020) <https://rmi.org/beyond-buying-renewables-how-cities-can-influence-the-energy-system/>.

federal level by the Federal Energy Regulatory Commission (FERC), retail sales regulated by state public utility commissions (PUCs), and facility and transmission siting regulated by a mix of other federal, state, and local authorities. Additional nuance depends on whether the state is traditionally regulated (i.e., utilities have vertically integrated monopolies) or “deregulated” (i.e., the generation and distribution functions of electricity service have been split) and whether or not the state sits in an independent system operator (ISO) or regional transmission organization (RTO) territory. While the details about electricity regulation have important consequences, from a municipality’s perspective they are largely background noise – a city will have to procure energy or catalyze energy development within the legal parameters applicable to it.

Electricity vs. Energy

While national and global carbon mitigation will require a diverse range of clean energy sources, in the city context, decarbonization often focuses on electrifying as much as possible and greening the electricity supply. Cities may have some reason to encourage the development of non-electricity energy sources (like geothermal), but carbon-free sources of electricity will for all cities be the main source of energy used in reducing local GHGs, particularly as more electric vehicles and heat pumps are deployed. Therefore, electricity law is particularly relevant in explorations of city renewable *energy* policy.

Legal Considerations for Utility-Scale Renewable Energy

Cities will need to procure or otherwise ensure the availability of enormous quantities of renewable energy, for both their own buildings and operations and for purchase by their residents, in order to reach their GHG and renewable energy goals. They will do so largely subject to state law and PUC regulatory requirements, and renewable energy purchasing options available in one state may be precluded in others. A major difference among regulatory regimes is whether customers have access to “retail choice” (the ability to choose an electricity generator), but there are many other variations in state law.¹⁸³ Local governments are increasingly intervening in state-level public utility commission proceedings, as well as in ISO decision-making processes, so some of these limitations may begin to lessen. Municipally-owned utilities and cooperatives are subject to alternative regulatory requirements.

Options for procuring renewable power depend on state law

Power purchase agreements (PPAs): Cities in jurisdictions that have retail choice can purchase a large quantity of renewable energy through a PPA with a project developer.¹⁸⁴ Under a PPA, the purchaser (also called the “oftaker,” who in this case is the municipality)

183 The U.S. Environmental Protection Agency maintains a map of traditionally regulated and deregulated or “competitive” state markets. *Understanding Electricity Market Frameworks & Policies*, U.S. ENV’T PROT. AGENCY, <https://www.epa.gov/repowertoolbox/understanding-electricity-market-frameworks-policies> (last visited Oct. 7, 2021).

184 *Procurement Guidance, Off-Site Physical PPA*, AMERICAN CITIES CLIMATE CHALLENGE RENEWABLES ACCELERATOR, <https://cityrenewables.org/off-site-physical-ppa/> (last visited Aug. 7, 2020).

must be licensed as a power marketer by FERC or hire a third party who is.¹⁸⁵ In states with traditionally regulated electricity markets with no retail choice, municipal customers will often not be able to obtain renewable power from anyone other than their utility.

Community choice aggregation (CCA). CCA is a program through which an aggregator – often a municipality – pools the electricity demand of its residents, leveraging group purchasing power to offer an alternative to the electricity generation provided by the local utility.¹⁸⁶ Under CCA programs, the existing utility provides all transmission, distribution, and billing services, with only the power generation provided by one or more third party power producers. CCA must be authorized by state law and there is significant variation among programs. Policymakers recommend that for maximum impact the CCA program should be “opt-out,” meaning that local residents are automatically enrolled unless they disenroll. In some places, CCA gives rise to legal and cost questions stemming from the utility’s traditional monopoly status. In California, for example, utilities are entitled to a Power Charge Indifference Adjustment meant to serve as an “exit fee” paid by the CCA customers to compensate for utility investments in electricity infrastructure.¹⁸⁷

Green tariffs. A green tariff “is a price structure, or an electricity rate, offered by a local utility” that allows customers to purchase electricity from renewable sources.¹⁸⁸ The customer (e.g., the city) contracts directly with the utility for renewable electricity and the associated renewable energy credits (RECs). A green tariff may be available in states without retail choice,¹⁸⁹ but its rate structure will need to be approved by the PUC, a process over which cities do not have direct control. In addition, terms may be onerous, such as those requiring lengthy commitments or prohibiting customers from net metering.

Virtual power purchase agreements (vPPAs): a financial tool to drive renewable generation

Virtual power purchase agreements (vPPAs) are financial transactions through which the customer receives the renewable energy credits, or RECs, associated with a project’s renewable energy generation, but under which no energy changes hands and the municipal customer still has to purchase its electricity locally.¹⁹⁰ Some state and local laws limit the types of investments municipalities may undertake with idle funds.¹⁹¹ For this reason, vPPAs should be framed as an expenditure of funds for a public purpose – i.e., to procure renewable energy – rather than as an “investment.”¹⁹² A local law or ordinance can help clarify the source of a municipality’s authority to enter into a vPPA, as well as define the acceptable terms.

185 18 C.F.R. § 35H (2016).

186 O’SHAUGHNESSY ET. AL., COMMUNITY CHOICE AGGREGATION: CHALLENGES, OPPORTUNITIES, AND IMPACTS ON RENEWABLE ENERGY MARKETS IV, (Nat’l Renewable Energy Lab’y eds., 2019).

187 CAL. PUB. UTIL. CODE §§ 360.5, 366.5 (2001).

188 *Utility Green Tariffs*, WORLD RESOURCES INST., <https://www.wri.org/initiatives/utility-green-tariffs> (last visited October 15, 2021).

189 *Procurement Guidance, Green Tariff*, AM. CITIES CLIMATE CHALLENGE RENEWABLE ACCELERATOR, <https://cityrenewables.org/overview/> (last visited Sept. 1, 2020).

190 RACHIT KANSAL, INTRODUCTION TO THE VIRTUAL POWER PURCHASE AGREEMENT 3 (Rocky Mountain Inst. eds., 2018).

191 See, e.g., OHIO REV. CODE. § 135.14 (2021) and MINN. STAT. § 118A.04 (2019).

192 See state public purpose requirements, including N.Y. CONST. art. VIII, § 1; FLA. CONST. art. IV, § 4, State ex rel. McClure v. Hagerman, 98 N.E.2d 835, 837 (1951).

Whether a city has the authority to enter into a vPPA is a complicated legal question.¹⁹³ In 2020, Arlington County, Virginia became the first U.S. municipality to enter into a vPPA.¹⁹⁴ The parties negotiated a price structure in which the seller, Dominion Energy, absorbs financial fluctuations throughout the year and calculates a “true-up” at the end of each year, with amounts owed from one party to the other credited or added to the next year’s bill.¹⁹⁵ In this way, the county is able to smooth cost variabilities.

Franchises and other city-utility agreements

Franchise agreements. In recent years, some cities have made creative use of their utility franchise agreements as leverage in utility negotiations. Franchise agreements are traditionally considered straightforward: the municipality provides a utility (electric, gas, or otherwise) with access to the public right-of-way (possibly in exchange for a fee); the utility uses such access to install the wires, poles, and other infrastructure needed to provide its services to residents. For cities with franchise agreements that are set to expire or that have opportunities for an early exit, a franchise renegotiation can provide needed motivation for the utility to consider demands for more renewable energy, expanded energy efficiency programs, and energy retrofits in underserved neighborhoods. A limited number of city-utility franchise agreements contain provisions relating to GHGs. For example, an Xcel affiliate’s franchise agreements in several Colorado municipalities commit to “actively pursu[ing] reduction of carbon emissions attributable to its electric generation facilities with a rigorous combination of Energy Conservation and Energy Efficiency measures, Clean Energy measures... [and] Renewable Energy Resources.”¹⁹⁶

Other city-utility partnerships. Some cities have standalone agreements with their local utilities to increase clean energy supply and improve energy efficiency offerings. Minneapolis and Salt Lake City leveraged franchise negotiations to reach these agreements. The Community Energy Partnership among Minneapolis and its electricity and gas utility companies addresses energy efficiency, renewable energy generation, community outreach, and more.¹⁹⁷ It has worked iteratively to develop GHG-reducing strategies, including to eventually achieve 100 percent renewable electricity.¹⁹⁸ Similarly, Salt Lake City entered into “Cooperation Statement” with Rocky Mountain Power that included a three megawatt sale of solar energy to the city.¹⁹⁹ Charlotte, NC; Sarasota, FL; Madison, WI; and Denver, CO also have city-utility partnership agreements.²⁰⁰

193 Memorandum from Sr. Fellow, Sabin Ctr. for Climate Change L., to Alisa Peterson, Rocky Mountain Inst., on Legal Research Regarding the Authority of the City of Columbus to Enter in a Virtual Power Purchase Agreement (“vPPA”) (Mar. 30, 2020), https://cityrenewables.org/wp-content/uploads/2021/01/Legal-Memo-on-VPPAs-in-Ohio_Sabin-Center.pdf.

194 Minutes, Meeting of the County Board of Arlington County, Virginia (Jan. 28, 2020) (on file with author).

195 Letter from Robert J. Trexler, Dir. Gov’t Regul., Dominion Energy, to Mark Schwartz, Cnty. Bd. of Arlington, Virginia (Jan. 2020), http://arlington.granicus.com/MetaViewer.php?meta_id=191931.

196 See, e.g., Franchise Agreement between the Town of Eaton, Colo. and Public. Service Corp. of Colo. § 14.1 (2018) (on file with the Sabin Center).

197 See *supra* note 130.

198 CLEAN ENERGY PARTNERSHIP PLANNING TEAM, MINNEAPOLIS CLEAN ENERGY PARTNERSHIP 2019-2020 WORK PLAN 6 (2018).

199 Press Release, Salt Lake City, Salt Lake City Corporation and Rocky Mountain Power Joint Clean Energy Cooperation Statement (Aug. 2016) <https://www.slc.gov/blog/2016/09/19/salt-lake-city-and-rocky-mountain-power-reach-agreement-on-ambitious-clean-energy-goals-for-city/>.

200 CELINA BONUGKU ET AL., UTILIZING CITY-UTILITY PARTNERHIP AGREEMENTS TO ACHIEVE CLIMATE AND ENERGY GOALS 1 (2019).

What about municipally-owned utilities?

While municipal utilities have not historically focused on environmental metrics, motivated municipal utilities can make electricity decarbonization a priority. For example, Austin Energy (in Texas) offers robust renewable energy options, including wind power, incentives for rooftop solar, and access to community solar programs, and currently claims that about a third of its electricity is renewable.²⁰¹ The public utility in Jefferson County, Washington, boasts 97 percent carbon-free energy (most of which is hydropower bought from the federal Bonneville Power Administration, for which publicly-owned utilities are first in line).²⁰²

For cities with investor-owned utilities, or IOUs, the decision whether to municipalize the electric utility is a complicated one, and the move may or may not be cost-effective. While nearly all states allow municipalization (Hawaii law is silent on municipalization and Rhode Island requires state legislative approval),²⁰³ the details vary.²⁰⁴ Municipalities may generally purchase the local IOU, and in many states may acquire it by condemnation. While the price for a negotiated purchase is determined by the parties, it will be informed by state laws relating to a utility's fair market value, or by a franchise agreement's pricing terms.²⁰⁵ Just compensation for condemned utility assets would also be determined by state law.²⁰⁶ Even where the city does not condemn IOU assets, but merely discontinues contracting with the local IOU for electricity service, cities can be liable for "severance costs" (costs for utility assets needed to "segregate the local distribution system from" the IOU)²⁰⁷ and, under FERC's Order 888, "stranded costs" (compensation for investments an IOU made in reliance on being able to sell power into a market).²⁰⁸ Significant litigation can arise from all of this.

In addition, some state laws require municipalization to be approved by voters, a process that gives the local IOU an opportunity to conduct a public campaign to keep electricity service private. Several other legal considerations need to be taken into account as well, including whether state PUC approval is needed for a certificate of public convenience and necessity or otherwise, and whether the municipality has the authority it needs to finance the purchase of the IOU.²⁰⁹ Rules for the municipalization of cooperative utilities ("coops") vary by state and may be different than they are for IOUs.

201 *Green Power and Renewable Energy*, AUSTIN ENERGY, <https://austinenergy.com/ae/green-power> (last visited Sept. 1, 2020).

202 *Where Does Your Electricity Come From?*, JEFFERSON CNTY. PUB. UTIL. DIST. <https://www.jeffpud.org/fuel-mix/> (last visited Sept. 1, 2020); Bonneville Project Act, 16 U.S.C. § 832c (1937).

203 R.I. GEN. LAWS §§ 39-1-1, 45-58-8; *Town of East Greenwich v. Narragansett Elec. Co.*, 651 A.2d 725, 729 (R.I. 1994).

204 See generally Abby Briggerman et al., *Survey of State Municipalization Laws* 1 (Am. Public Power Ass'n eds., 2012).

205 Paul Hughes, *Renegotiating A Municipal Franchise During Electricity Restructuring and Deregulation*, prepared for the American Publ. Power Ass'n (July 2002) at p 10.

206 *Survey*, *supra* note 204.

207 Uma Outka, *Cities & the Low-Carbon Grid*, 46 ENV'T L. 105, 139-40 (2016).

208 18 CFR § 35.26 (1997).

209 Suedeem G. Kelly, *Municipalization of Electricity: The Allure of Lower Rates for Bright Lights in Big Cities*, 37 NAT. RESOURCES J. 43, 54 (1997).

Legal Considerations for Distributed Renewable Energy

There are several affirmative steps that cities can take to incentivize and shape distributed renewable energy development. This section discusses legal issues that can arise in this context.

Regulatory measures to spur distributed generation

Permitting. Estimates put the cost of local regulatory requirements connected to rooftop solar installations at hundreds to thousands of dollars per solar energy system.²¹⁰ While some experts favor state-wide permitting standards for solar energy that are consistent from city to city, in the absence of state regulation municipalities can accelerate solar development by streamlining local permitting requirements. A city could enact a “uniform solar permit” that simplifies the approval process, or might waive permitting fees, as in South Miami, Florida, or expedite permitting reviews, as Los Angeles, California does, for residential solar installations.²¹¹

Zoning. Zoning codes that do not provide for clear rules around solar panels can make solar energy an unappealing investment. Simple zoning tweaks can mitigate this uncertainty. For example, Aurora, Colorado and Austin, Minnesota have laws permitting solar systems in all zoning districts (subject to height, setback, and other requirements).²¹² In Cambridge, Massachusetts, owners of solar energy systems may register them with the city to provide notice to neighbors and offer limited protections in case a neighboring developer seeks a variance to build a larger building that would block sunlight.²¹³ Zoning codes can also offer incentives for renewable development. Municipalities will need to heed the varying state law constraints on what topics can be covered by local zoning laws.

Storage and microgrids. Many regulatory fixes can be adapted to facilitate battery storage and microgrid technologies. Cities can clarify zoning and permitting requirements for energy storage – for example, by ensuring that solar-plus-storage is treated with no more burdensome requirements than solar-only installations. Microgrids, which enhance resiliency and mitigate GHG emissions with solar panels, energy storage, and demand response techniques, can be supported through “energy district” zoning, as well as with mixed use zoning, such that buildings with different uses tap into the microgrid’s energy sources at different times of day.²¹⁴ C2ES identifies several key legal and policy tools, including expediting permitting and waiving fees, reviewing franchise agreements for potential conflicts, and establishing “district energy zones that provide municipal infrastructure” to support microgrid development.²¹⁵

Community solar

Community solar – a shared solar installation at an offsite location – is a way to broaden

210 K.K. DuVivier, *Distributed Renewable Energy* in LEGAL PATHWAYS TO DEEP DECARBONIZATION 497 (Michael B. Gerrard & John C. Dernbach, eds., 2019).

211 *Id.* at 497-98.

212 AURORA, COLO. CODE § 146-1280 (2011); AUSTIN, MINN. CODE § 11.84 (2013).

213 Cambridge, Mass. Zoning Ordinance art. 22.60 (2017).

214 Travis Sheehan, *Developing Smarter Cities: District Energy and Microgrids*, SMART CITIES DIVE <https://www.smartcitiesdive.com/ex/sustainablecitiescollective/how-cities-can-develop-smarter-district-energy-and-microgrids/153461/>.

215 DOUG VINE & AMY MORSCH, MICROGRIDS: WHAT EVERY CITY SHOULD KNOW 4, (Ctr. for Climate & Energy Solutions eds., 2017).

access to solar power, perhaps to people who rent their homes, live or work in multiunit buildings, or have limited sunlight. The specifics of community solar arrangements vary, but they generally follow either ownership (people own panels at the project site) or subscription (customers subscribe to a project for a period of time) models. Community solar projects that serve frontline neighborhoods may be located nearby to help reduce local air pollution from fossil fuel power sources, though the community solar framework does not require this.

With careful structuring, community solar projects can generally be designed to comply with applicable laws. Many states have laws or utility regulations relating to community solar projects, requirements that may include caps on capacity, rate limits, subscriber requirements (minimum number, preference for low-income customers), and geographic restrictions (proximity to subscribers may be required).²¹⁶ Cities can facilitate community solar by clarifying zoning, siting, and permitting requirements applicable to small-scale solar projects. Cities could also make the permitting process as simple as reasonably possible for parcels that comply with state law community solar parameters.

State and local net metering requirements

A small-scale solar project's ability, or not, to sell excess energy into the grid has a significant impact on its economics. In most places, electricity ratemaking is determined at the state level, including rates for net metering. But many localities have at least some ability to influence net metering policy. Ordinances in some municipalities prohibit small solar installations from participating in net metering, leaving these smaller systems limited to use for the buildings on which they are located.²¹⁷ Allowing universal access to any state net metering programs will increase the availability of distributed renewable energy.

Building codes and distributed energy development

There are many ways a building code can mandate or support renewables. New York City requires new buildings to cover their roofs with solar panels and/or a green roof system, and many cities in California also have solar energy requirements.²¹⁸ For cities not ready to require solar installations, a "solar-ready" requirement can facilitate solar energy at a later time.²¹⁹ Renewable energy can also be used as a compliance pathway, as in Boulder, where onsite renewable energy systems factor into a building energy score, giving builders an incentive to include them.²²⁰ Cities that lack local building code authority would need to rely on another source of authority to enact a renewable energy requirement (subject to challenges that such a requirement would be preempted by a state building code or other state law).

Solar access rights

Distributed solar generation has one obvious foil: shadow. While state law largely informs the property rights relating to solar access (including concepts like solar easements), there

216 Sara E. Bergan et al., *Community Solar in THE LAW OF SOLAR: A GUIDE TO BUSINESS AND LEGAL ISSUES 1-3*, (Stoel Rives LLP eds., 2017).

217 K.K. DuVivier, *supra* note 210, at 506.

218 NEW YORK, N.Y. LOC. L. 94 (2019); SANTA MONICA, CAL. CODE. §§ 8.36 and 8.106 (2017).

219 See, e.g., SEATTLE, WASH. CODE §§ C411-C412 (2015).

220 BOULDER, COLOR. CODE § R406 (2020).

are some legal tools cities can use on their own. Zoning regimes can take solar access into account by limiting development in areas with high solar potential. Municipalities could also look to some of the “shadow laws” that protect public parks in San Francisco and Boston²²¹ and environmental review requirements that consider shadow impacts.²²² These types of legal reviews could be extended to protect other resources, including solar energy systems.

Wind energy impacts

One significant difference from solar energy is that wind turbines move by design. They can be noisy and generate flickers of shadow and light, giving rise to nuisance claims. Cities may play a role in delineating how both wind energy development and potential impacts to neighbors are treated. Municipalities can require setbacks and height and noise (decibel) limits, as they often do for oil and gas development. Zoning is a common legal tool used to enact such rules.

Conclusion

While energy generation and distribution are highly regulated at the state and federal levels, local governments have significant legal tools at their disposal to catalyze renewable energy uptake in their communities. Through land use and building regulation, contracting arrangements, creative community solar and bulk renewable power procurement strategies, and more, local governments have opportunities to use the law to scale up renewable energy development.

221 SAN FRANCISCO, CAL. CODE § 295 (2015); 1990 Mass. Acts Ch. 362.

222 *E.g.*, N.Y.C. OFFICE OF ENVIRONMENTAL COORDINATION, CITY ENVIRONMENTAL QUALITY REVIEW TECHNICAL MANUAL ch. 8 (2014).

7. WASTE

Of the sectors accounted for in the *Global Protocol for Community Scale Greenhouse Gas Emission Inventories* (“*Global GHG Protocol for Cities*”),²²³ a city’s waste stream generally has the smallest carbon footprint. Most U.S. cities’ waste accounts for five percent or less of their GHG emissions inventories.²²⁴ Despite this relatively small portion of a city’s GHGs, many municipal solid waste landfills are publicly owned, and are a major source of emissions of methane, a greenhouse gas significantly more potent than carbon dioxide. Without question the waste sector merits close attention.

A zero waste goal, even if only aspirational, is often an early step for cities looking to reduce waste and associated carbon emissions. Some cities codify their waste diversion goals in law.²²⁵ This chapter focuses on the tools cities use to reduce waste and waste GHGs and the legal issues they encounter.

A Note on Equity

By reducing GHGs and other air emissions from city waste streams and waste hauling and processing practices, cities have a significant opportunity to redress the historic and ongoing damage that waste disposal has done to environmental justice communities. Waste processing facilities, landfills, transfer stations, and incineration sites have often been sited in low-income and minority neighborhoods; high rates of childhood asthma and other diseases attributable to criteria air pollution reflect this injustice.²²⁶ There are four main ways in which policy aimed at reducing waste GHGs can overlap with – advancing or inhibiting – equity-related objectives. First, siting decisions for new waste processing facilities can disproportionately burden environmental justice communities – in number of nearby sites, vehicle traffic, or localized emissions. Second, the benefits of new zero-emissions trucks may be deployed to the benefit of EJ communities first, perhaps on routes through areas with significant local air pollution. Third, the infrastructure to support emerging zero-waste practices may be made accessible to all, as through community composting programs. And fourth, waste policies may be designed to lessen or avoid financial burdens on low-income communities, as through creating exemptions to certain fees.

223 *GHG Protocol for Cities*, *supra* note 8, at 85-103.

224 C40 Cities Climate Leadership Group, *supra* note 9.

225 See, e.g., Washington, D.C. Sustainable Solid Waste Mgmt. Amendment Act of 2014, WASHINGTON, D.C. CODE CH. 10A (2014) (80% waste diversion requirement); SAN FRANCISCO, CAL. RES. NO. 679-02 (2002) (zero waste goal).

226 See, e.g., Rina Li, *Nearly 80% of US Incinerators Located in Marginalized Communities, Report Reveals*, WASTEDIVE (May 23, 2019), <https://www.wastedive.com/news/majority-of-us-incinerators-located-in-marginalized-communities-report-r/555375/>; Philip J. Landrigan et al., *Environmental Justice and the Health of Children*, 77 *MT. SINAI J. MED.* 178-187 (2010).

The Basics of GHG Waste Accounting

The *Global GHG Protocol for Cities* requires cities to calculate the GHGs associated with their municipal solid waste (MSW), sludge, industrial waste, wastewater, clinical waste, and hazardous waste. The emissions attributable to these waste streams include emissions from waste processing, incineration, and waste decomposition in a landfill. A city's waste-related GHGs include those for waste that originates in the city, *wherever disposed of*; unlike other GHG sectors, waste GHG measurements do not stop at the city boundary. GHGs relating to waste processing but attributable to other sectors, like stationary energy and transportation, are counted in those other sectors.

Waste Decarbonization: The Legal Frameworks

City waste reduction plays out against the backdrop of three legal frameworks: (1) federal law and the dormant Commerce Clause; (2) state law; and (3) contractual law and obligations.

Dormant Commerce Clause

The dormant Commerce Clause bars states and local governments from passing laws that discriminate against out-of-state economic actors or otherwise have an undue burden on interstate commerce.²²⁷ In the waste context, laws banning the importation of waste from out-of-state or out-of-city to private local waste processing facilities will generally be unconstitutional.²²⁸ Similarly, a requirement that all local waste go through a specific, privately-owned transfer station would also likely be held invalid.²²⁹ The dormant Commerce Clause is less likely to be in tension with requirements relating to publicly-owned waste facilities; in other words, a local government may require that local waste be sent through a publicly-owned facility, particularly if balanced with local benefits such as “enhanced incentives for recycling” and local enforcement of recycling laws.²³⁰

State law

Solid waste collection and processing is both regulated at the local level and situated in the context of state law. As a general matter, state laws relating to waste collection, control, processing, or recycling can preempt conflicting local laws, but most state legislatures have not regulated so expansively as to preempt all local-level controls. Many local jurisdictions have zoning controls relating to waste processing facilities; so long as these controls do not conflict with state law, they are generally permissible.²³¹ While the details vary by state, one takeaway is clear: many cities can regulate to a large extent the location of waste disposal sites, but they may be limited in the restrictions they can impose.

227 U.S. CONST. ART. I, § 8, cl. 3; *Wyoming v. Oklahoma*, 502 U.S. 437, 454 (1992).

228 *Philadelphia v. New Jersey*, 437 U.S. 617, 628 (1978).

229 *C&A Carbone, Inc. v. Town of Clarkstown, N.Y.*, 511 U.S. 383, 392 (1994).

230 *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 334, 347 (2007).

231 In Connecticut, a state regulator oversees disposal site permitting and operations, while local governments may regulate through zoning and other laws. See, e.g., CONN. GEN. STAT. §§ 22a-208(a)-(b) (2019).

City legal and contractual limitations

Because the economics of a waste processing or disposal are so consequential to continued service by a facility, municipalities use legal and contractual tools to guarantee a financial return. **Flow control laws** are requirements that a government cause a minimum quantity of waste to be delivered, or require that all waste generated in a specified geographic area be delivered to a landfill or waste facility, possibly to ensure that a waste facility will be profitable or be able to repay its bonds.²³² A **“put or pay” contract** sets a minimum amount of waste disposal that a government must pay a facility for, regardless of the actual amount of waste delivered.²³³ Finally, depending on state law, municipalities can assess **taxes and/or fees on waste** (non-recyclable, recyclable, organic, etc.) tipped, dumped, collected, or transported. All of these mechanisms alter the incentives for waste diversion and reduction. They can entrench practices that do not align with a city’s waste reduction goals, or they can be leveraged to increase investment in desired waste processing facilities like composting and recycling. Some of the cases described in the paragraph above discussing the dormant Commerce Clause involved flow control requirements routing waste through specific facilities, but these contractual tools are common around the country.

Plastic Product Bans

Many cities impose restrictions on plastic products like single-use shopping bags, expanded polystyrene (EPS, a/k/a Styrofoam) foam containers, and other single use plastic items. Generally, these products are not banned outright – possession is not prohibited – but are restricted as handouts at points of sale. Plastic makes up approximately 12 percent of municipal solid waste in the U.S.²³⁴ While not a large component of a city’s overall GHGs, plastic waste reduction is necessary to achieve net zero goals, because it reduces emissions from waste transport, processing, and incineration.²³⁵

State preemption of local plastic product bans

Preemption: State law expressly preempts local plastic bag bans in at least 14 states.²³⁶ Local EPS bans can also be preempted by state law, including in the same law that preempts bag bans.²³⁷

Fees for paper bags: A key bag ban policy consideration is whether paper bags are offered as free alternatives at points of sale or whether they are subject to a five or ten cent charge. State law might address this question, as well as restrict how paper bag fee revenue may be spent.²³⁸

232 KATIE SANDSON & EMILY BROAD LIEB, BANS AND BEYOND: DESIGNING AND IMPLEMENTING ORGANIC WASTE BANS AND MANDATORY ORGANICS RECYCLING LAWS 54 (2019).

233 *Id.*

234 *Nat’l Overview: Facts & Figures on Materials, Wastes & Recycling*, U.S. ENV’T L PROTECTION AGENCY, <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling> (last visited May 24, 2021).

235 Under a consumption-based emissions accounting regime, these GHG emissions associated with a product’s end-of-life would be attributed to a city’s emissions inventory.

236 State statutes listed at *Defend Your Local Right to Reduce Plastic Pollution*, Surfrider Foundation, <https://www.surfrider.org/pages/defend-your-local-right-to-reduce-plastic-pollution> (last visited Sept. 11, 2020).

237 *E.g.*, ARIZ. REV. STAT. § 9-500.38 (2016).

238 *See, e.g.*, N.Y. ENV’T L CONSER. L. § 27-2805(1)(b) (2019).

Plastic product ban litigation

Environmental claims: Bans on plastic products can lead to an increase in the use of alternative products – often other disposables. For example, if plastic bags are unavailable at checkout, but paper bags are distributed freely, paper bag use is likely to increase. Some lawsuits have made claims relating to the impacts of these alternative products. In a lawsuit opposing a Manhattan Beach, California plastic bag ban, petitioners argued that the city should have better examined the environmental impacts of increased paper bag use. The court dismissed this claim.²³⁹ Similar claims regarding San Diego’s EPS ban led to the city’s agreeing to conduct an environmental assessment before enforcing its ban.²⁴⁰

Taxes, fees, and charges for paper bags: Many cities do not have authority to impose new taxes without state and/or voter approval. In such cities, bag charges could be alleged to be impermissible taxes, rather than fees.²⁴¹ This has in some instances led to litigation. In Los Angeles County, for example, a plastics manufacturer plaintiff claimed that a charge for paper bags was in violation of a state constitutional amendment requiring new local taxes be approved by voters.²⁴² The county prevailed in litigation, successfully arguing that because the money collected was kept by the retailers rather than paid to the local government, it did not constitute a tax.

Miscellaneous claims: Plastic product bans are targets for litigation. For example, following the passage of two New York state laws – a plastic bag ban and a bag recycling law – grocery store owners alleged inconsistencies between the two laws, among other claims. While a small portion of the plastic bag ban was struck down (relating to the distribution of thicker, “reusable” plastic bags), a state court allowed the ban to stand.²⁴³ Another case, in New York City, resulted from a requirement that the city’s department of sanitation make a determination as to whether EPS recycling was environmentally effective and economically feasible before implementing a ban on the material. A coalition of EPS manufacturing, recycling, and restaurant interests sued, claiming that the determination that EPS recycling was not environmentally effective and economically feasible was “arbitrary and capricious.”²⁴⁴ A state court agreed, sending New York City back to make a new determination and reintroduce the EPS ban, at which point it survived legal challenge.²⁴⁵ Cases like these are too diffuse to draw broad conclusions from, other than to note that cities can expect legal challenges.

239 Save the Plastic Bag Coal. v. City of Manhattan Beach, 254 P.3d 1005, 1018 (Cal. 2011).

240 San Diego, Cal., Polystyrene Foam and Single Use Plastics Ordinance No. 21030 (Jan. 24, 2019).

241 Jennie R. Romer & Leslie Mintz Tamminen, *Plastic Bag Reduction Ordinances: New York City’s Proposed Charge on All Carryout Bags as a Model for U.S. Cities*, 27 TULANE ENVTL L. REV. 237, 247 (2014).

242 Schmeer v. Cnty. of L.A., 153 Cal. Rptr. 3d 352, 356 (Ct. App. 2013).

243 Poly-Pak Industries, Inc. v. State of N.Y., Index No. 02673-20 (N.Y. Sup. Ct., Aug. 20, 2020) (N.Y.S.C.E.F. Doc. No. 17).

244 Verified Petition, Restaurant Action Alliance v. Garcia, No. 100734/2015 (N.Y. Sup. Ct., filed April 28, 2015).

245 Matter of Restaurant Action All. N.Y.C. v. City of New York, 85 N.Y.S.3d 67, 67 (N.Y. App. Div. 2018).

Waste, Recycling & Organics Processing Facilities

Zoning and permitting to facilitate recycling and organics facilities

Recognizing that zoning restrictions can limit new waste processing facilities, several cities have revised their zoning codes to accommodate the need for new recycling facilities. Fresno, California, for example, permits both large and small recycling facilities – large processing plants in certain districts only, with a minimum three-acre size and far away from residential areas, and smaller recycling centers within other businesses as a conditional use.²⁴⁶ In Madison, Wisconsin, large recycling centers are permitted in identified industrial districts and conditionally permitted in employment districts.²⁴⁷

Evolving waste processing needs

Cities can encourage waste processing sites that are adaptable to changes in needs over time – for example, that can adjust to facilitate new categories of recycling.²⁴⁸ While a city may not have direct control over the design of a facility it does not own or operate, cities can use contract terms, financial incentives, or building or zoning code requirements to ensure waste processing facilities allow for changing needs.

Waste-to-energy, anaerobic digestion, and landfill gas capture and flaring

Some cities process waste through incineration at waste-to-energy facilities and, for waste with a higher organics content, through anaerobic digestion. (Waste incineration is not without controversy.) As in other facets of city waste policy, waste-to-energy plays out against the backdrop of federal, state, and local law. Facilities will need to be sited pursuant to applicable zoning and land use regulations.²⁴⁹ State law can shape the economics of waste-to-energy through the treatment of waste-to-energy products under renewable portfolio standards (RPS) and renewable energy credit (REC) programs, as well as by whether such projects can participate in net metering.²⁵⁰ In many states, MSW-to-energy projects are treated as “Tier 2” sources with less favorable REC rates than “Tier 1” sources such as solar and wind,²⁵¹ and in some states, waste incineration is not included in the RPS at all.²⁵² In addition, some federal laws, like the Resource Recovery and Conservation Act (RCRA),²⁵³ are at odds with minimizing methane emissions from landfill gas – in some instances when landfills are not properly covered, RCRA encourages methane to be vented.²⁵⁴

246 FRESNO, CAL. CODE § 15-2750 (2018), discussed in KYLE MASSNER, LOCAL RECYCLING CENTERS, SUSTAINABLE DEVELOPMENT CODE: CLIMATE CHANGE 29 (Jonathan Rosenbloom ed., 2020).

247 MADISON, WI. CODE tbl. 27F-1 (2017), discussed in Massner, *id.*

248 BENJAMIN MILLER, WASTE: MANAGING NEW YORK’S MUNICIPAL SOLID WASTE TO SUPPORT THE CITY’S GOAL OF REDUCING GREENHOUSE GASES BY 80% BY 2050 20 (N.Y. League of Conservation Voters Educ. Fund 2017).

249 Such facilities are prohibited in Rhode Island. See R.I. GEN. LAWS. §§ 23-19-3, 23-19-11 (2011).

250 Steven Ferrey & Romany M. Webb, *Methane and Climate Change* in LEGAL PATHWAYS TO DEEP DECARBONIZATION 896 (Michael B. Gerrard and John C. Dernbach, eds., 2019).

251 RICHARD LING, POWERING OUR FUTURE WITH TRASH 3 (Kleinman Center for Energy Pol’y eds., 2019).

252 Arlene Karidis, *The 50 States of Waste: How Waste-To-Energy Definitions Vary Across the Nation*, WASTE DIVE (Mar. 24, 2016), <https://www.wastedive.com/news/the-50-states-of-waste-how-waste-to-energy-definitions-vary-across-the-nat/416197/>.

253 42 U.S.C. §§ 6901-6992 (1976).

254 Ferrey & Webb, *supra* note 25, at 896.

Organic Waste

An emerging waste diversion tool is the mandatory organics recycling requirement, or, alternatively, an organic waste disposal ban. A mandatory organics recycling law specifies ways in which organic waste must be handled, while an organic waste ban simply prohibits the landfilling of such waste, leaving generators to figure out what to do with it.²⁵⁵ Organics requirements include those in Austin, Texas; Boulder, Colorado; Hennepin County, Minnesota; Portland, Oregon; New York City; San Francisco, California; and Seattle, Washington.²⁵⁶

Enforcement of recycling laws

Privacy protections. Enforcement against individual households can raise privacy concerns. A Washington court struck down part of a Seattle law that allowed for a “visual inspection” of private garbage cans as impermissible “warrantless searches” in contravention of the state constitution.²⁵⁷ The court otherwise upheld Seattle’s ban on organic waste in residential garbage as an appropriate exercise of its police powers.

Mandatory or voluntary? Some cities, like San Francisco, nominally impose fines for failure to segregate organic waste, but do not actively monitor compliance due to privacy and other practical considerations.²⁵⁸ A non-mandatory program avoids questions about enforcement but may be less effective; the voluntary nature of New York City’s organics program meant that collection trucks were operating below full capacity, making for a high cost-to-weight ratio, and the program was put on hold during the Covid-19 pandemic.²⁵⁹

Agency authority. Lawmakers must consider who is tasked with enforcing an organics requirement. Is the enforcing agency (often an environmental agency) the same one that oversees restaurants, for example?²⁶⁰ When a new agency steps in to regulate generators of organic waste, a regulatory quagmire may result for an entity that must comply with overlapping and possibly inconsistent requirements.

Legal barriers inhibiting development of composting facilities

Composting operations may be subject to overlapping state and local laws. For example, Texas has permitting requirements for composting operations, though many operations are exempt.²⁶¹ Some California air districts have rules on ammonia, volatile organic compounds, and particulate matter emissions at composting facilities.²⁶² Other states set

255 Sandson & Leib, *supra* note 233.

256 See *id.*; AUSTIN, TEX. CODE § 15-6-91 (1992); BOULDER, COLO. CODE 6-3-13-18 (2021); HENNEPIN CNTY, MINN., Ordinance 13 (Nov. 27, 2018); OR. ADMIN RULE Ch. 5.10.410-470 (2018); NEW YORK, N.Y. CODE § 16-306.1 (2021); SAN FRANCISCO, CAL. CODE §§ 1901-1912 (2009); and SEATTLE, WASH. CODE § 21.36.082- 21.36.083 (2017).

257 Order on Cross Motions for Summary Judgment at 11, *Bonesteel v. City of Seattle*, No. 15-2-17107-1 (Wash. Super. Ct., King 2016); WASH. CONST. art. I §7.

258 San Francisco, Cal., Ordinance No. 100-09 (June 9, 2009); Plastrik & Cleveland, *supra* note 129, at 26.

259 Lisa M. Collins, *The Pros and Cons of New York’s Fledgling Compost Program*, N.Y. TIMES (Nov. 9, 2018), <https://www.nytimes.com/2018/11/09/nyregion/nyc-compost-zero-waste-program.html>

260 Sandson & Leib, *supra* note 233, at 38.

261 30 TEX. ADMIN. CODE Ch. 332 (1995).

262 *E.g.*, South Coast Air Basin, Cal. Quality Mgmt. Dist. Rules 1133-1133.3 (2003).

material composition standards and regulate land application of compost.²⁶³ Local barriers include zoning requirements that prohibit composting facilities and waste hauling franchise agreements that inadvertently restrict cities from engaging with organic waste processors.²⁶⁴ These obstacles can be unduly restrictive as applied to small-scale composting operations at community gardens or small farms. To alleviate this concern, small composting operations can be carved out of franchise and zoning restrictions even if larger operations are not.²⁶⁵

Waste Transport Emissions

Sanitation departments rely on a network of vehicles to remove and transport waste. Reforms to waste handling and transport can reduce GHGs from the transportation sector – a benefit to a city’s overall GHG reduction goal. The primary legal issues that can arise in decarbonizing waste transport are discussed here.

Waste carting franchise agreements

Some cities offer franchise contracts to commercial waste haulers. Los Angeles implemented an exclusive commercial waste franchise program across eleven zones of the city, and New York City enacted a non-exclusive “commercial waste zones” law.²⁶⁶ These programs not only reduce carting emissions by limiting truck miles, but also leverage long contract terms to incentivize franchisees to invest in recycling and composting infrastructure with confidence they will earn a financial return.

Waste carting franchise arrangements can attract litigation. In Los Angeles, building owners sued the city for the increased costs that the franchise system brought with it. One suit alleged that the franchise system was uncompetitive and allowed franchisees to tack on extra fees that amounted to a tax requiring approval by voters.²⁶⁷ The city settled, agreeing to refund or waive more than \$9 million in fees to building and business owners and to take over approximately \$7 million in costs per year going forward.²⁶⁸ Two cases in Reno, Nevada alleged that the city’s franchise agreement with Waste Management constituted price fixing or other noncompetitive behavior. These claims lost in court.²⁶⁹ Litigation in Oakland, California examined franchise fees charged by the city to the waste franchisee, with the court holding that such fees must be “reasonably related to the value received from the government,” lest they be considered unauthorized taxes.²⁷⁰ Despite these various claims, waste franchising is generally an acceptable exercise of municipal authority.

263 *E.g.*, 6 N.Y. COMP. CODES R. & REGS. tit. 6 § 361-2.1 (2017).

264 SUSTAINABLE ECONS. L. CTR., *GROWING COMPOST: A POLICY GUIDE TO PRESEVING CRITICAL COMMUNITY COMPOSTING IN CALIFORNIA 18-19* (2017).

265 *See, e.g.*, San Diego County, Cal. Ordinance § 6912 (2008); SAN DIEGO, CAL. CODE § 141.0620 (2013).

266 Los Angeles, Cal., Ordinance No. 182986 (Apr. 18, 2014) and NEW YORK, N.Y. LOC. LAW 199 (Nov. 20, 2019).

267 Complaint for Injunction, *Betz v. City of Los Angeles*, No. BC664070 (Cal. Super. Ct., 2017).

268 Sharon McNary, *Commercial Recycling in LA Will Be Free & Millions In Refunds Will Be Handed Out*, LAIST (Feb. 15, 2019 11:21 AM) <https://laist.com/news/after-recyclas-rocky-rollout-commercial-recycling-in-la-will-be-free>.

269 *Green Solutions Recycling v. Reno Disposal Co.*, No. 19-15201 (2020) and 359 F. Supp. 3d 960, 971 (2019).

270 *Zolly v. City of Oakland*, 260 Cal.Rptr.3d 541, 552 (Cal. App. Dep’t Super. Ct. 2020).

Requiring trash haulers to use electric trucks or other zero emissions vehicles

A local requirement that private waste haulers purchase or deploy electric trucks or other ZEVs would almost certainly be preempted by the CAA²⁷¹ and/or EPCA.²⁷² An incentive for private haulers to use ZEVs would likely be legally permissible, so long as the incentive was not “so coercive as to”²⁷³ amount to a de facto mandate. Local governments may take advantage of a market participant exception to both the CAA and EPCA, allowing a government to spend its own money in the way it chooses.²⁷⁴

Conclusion

Waste management is a traditional local government function, and municipal governments have the authority to establish policies that can help reduce GHGs attributable to materials consumption and disposal. City governments have a number of legal tools at their disposal to reduce both GHGs directly attributable to waste decomposition and processing and those emitted by transportation and stationary energy sources in the chain of waste hauling and treatment. In so doing, they need to be attuned to the potential for state law preemption and the role that local restrictions – such as in a zoning code – may play. Beyond these legal parameters, cities have a meaningful opportunity to help divert waste from landfills and “design out” waste in ways that can reduce GHGs locally and globally.

271 42 U.S.C. § 7543(a); *Engine Mfrs. Ass’n v. South Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 255 (2004).

272 49 U.S.C. § 32919(a); *Metro. Taxicab Bd. of Trade v. City of New York*, 615 F.3d 152, 152 (2d Cir. 2010).

273 *Ass’n of Taxicab Operators U.S.A. v. City of Dallas*, 720 F.3d 534, 541 (5th Cir. 2013); see *id.* at 154.

274 *Engine Mfrs. Ass’n v. South Coast Air Quality Mgmt. Dist.*, 498 F.3d 1031,1040 (9th Cir. 2007); 49 U.S.C. §32919(c).

CONCLUSION

U.S. cities have shown commendable leadership in assessing their GHG emissions and potential for impactful mitigation policy and in innovating new legal and policy tools to reduce their carbon footprints. Local leaders know that climate change is real, and they know that local climate policy will not only contribute significantly to global GHG reductions, but will also reshape many aspects of residents' everyday lives. Approached with ambition and care, local climate policy has the potential to remake lived experiences for the better – to improve housing stock, to get people out of cars, and to lessen the pollution that surrounds frontline neighborhoods, among other things.

The next several years will make all the difference in keeping our cities at livable temperatures, and for local governments, the challenge to decarbonize will not go away. So many of our cities are vulnerable to sea level rise, extreme heat, severe storms, drought, and other forms of natural disaster. For local leaders, part of the challenge will be to untangle the layered legal frameworks that govern federal, state, and local authority, environmental pollution, energy policy, and much more. Most of our laws were not written for the climate emergency. Some existing laws will shape the boundaries of city climate policy, while others will preempt certain policies altogether. Future preemption by state legislatures only adds to the potential challenges.

The law also offers opportunities for novel climate action at the local level. By understanding the applicable legal frameworks – both obstacles and opportunities – local governments can develop innovative climate solutions to reduce their own GHGs and to provide models to others. To borrow the words of Justice Louis Brandeis, “a single courageous State [or city] may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”²⁷⁵ This “laboratories of democracy” framework has catalyzed climate action by allowing cities to experiment with novel, climate-friendly policies. As new challenges emerge, part of the laboratories' function will be to parse the legal underpinnings of climate policy and to develop approaches that are equitable and that comport with the constraints of local governments. Ultimately, a solid and ever-evolving understanding of the law will help cities make the most of their ability and willingness to lead on climate.

²⁷⁵ *New State Ice Co. v. Liebmann*, 285 U.S. 262, 387 (1932).

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