

The Role of Local Ordinances in Advancing Effective Climate Mitigation and Adaptation Policies

Background

Climate change is a defining challenge of our time, with growing significance for every sector of the economy and every segment of society. While policymakers, advocates, and businesses in the U.S. have understandably focused on carbon emissions reduction measures and climate adaptation strategies at the national and state levels, less attention has been paid to the steps local governments — towns, cities, and counties — can take to safeguard people and infrastructure from the effects of a changing climate, and to accelerate the transition to lower-carbon energy and transportation systems.

The Georgetown Climate Center (GCC) has a 15-year track record of supporting the development and implementation of effective, equitable, and durable climate and energy policies, focusing on the critical interactions among state, federal, and local policies. As the federal government pulls back from its role in climate policy, and states grapple with new obstacles to their own climate leadership, climate action at the local government level is increasingly relevant. Although local authority is constrained in its geographic scale, local government action is an essential element in implementing a wide range of climate adaptation, clean transportation, and renewable energy solutions. Local laws or ordinances can be indispensable in making possible the on-the-ground changes needed to accelerate emissions reductions and clean energy deployment, and to manage risks from extreme weather, flooding, wildfire and other climate driven hazards.

Seeking effective local climate ordinances

To better understand the potential for local action to advance better climate policy, GCC explored some steps local governments might take to facilitate good climate adaptation and mitigation actions in their communities. Our research sought out examples of effective local ordinances and other best practices that have already been implemented in U.S. communities, then evaluated the potential for adopting or adapting those models in four Northeast and Mid-Atlantic states: Maryland, New York, Connecticut, and Maine. In each state, we assessed the extent to which communities are permitted to adopt those ordinances. Finally, we suggest approaches communities might take to implement those steps, and criteria that could be used to evaluate whether a community might be well positioned to pursue those approaches.

Adaptation, energy, and transportation

GCC focused its work on six local ordinances that can advance climate goals while benefiting communities and the economy. The laws within each state determine what public responsibilities fall under state control or local jurisdiction. However, as a general rule, questions of land use — including zoning, master planning, and floodplain management — fall within the purview of local governments. With that in mind, GCC worked to identify six active climate policy issues that a) have the potential to contribute to solving big challenges in responding to the climate crisis and b) can be addressed, in whole or in part, through ordinances that change local laws or regulations.

The six issues we examine in this research are:

- **Clean Energy Deployment:** Strengthening community engagement practices to support wind, solar, and battery energy deployment.
- **Data Centers:** Limiting the community and environmental impacts of data centers.
- **Floodplain Mapping:** Updating flood risk maps and zoning regulations to discourage development in places at risk from increasingly frequent and severe flooding.
- **Freeboard Standards:** Improving freeboard standards so that buildings in flood-prone areas are elevated above the expected levels of current and future floods.

- **Transit-Oriented Development:** Enabling transit-oriented development (TOD) to reduce reliance on cars and improve access to clean, affordable transit options like subways.
- **Medium- and Heavy-Duty Zero-Emissions Vehicle Deployment:** Facilitating siting of convenient public charging for medium- and heavy-duty zero-emissions vehicles (MHDZEV), such as electric freight trucks.

Local action and engagement can unlock broader progress

While each of these topics each comes with unique considerations, they all have in common the potential to be addressed — at least in part — through local ordinances. For example, GCC's analysis shows that a relatively straightforward change to local zoning regulations for public charging facilities can clear the way for rapid construction of charging infrastructure for medium- and heavy-duty electric trucks. By adding or clarifying definitions of permitted land uses to differentiate electric truck charging facilities from traditional diesel truck depots (with their attendant fuel storage tanks and air pollution from internal-combustion engines) localities can make the job of zoning commissions easier while smoothing the path for low-emissions freight and delivery trucks.

In this paper we also identify several types of state and local actions that can enable each of these ordinances to be most effective. These include updates to state enabling laws, rigorous public engagement processes, and new sources of funding for implementation. For example, siting clean energy facilities effectively requires public engagement; likewise, floodplain management plans are stronger when informed by local stakeholder input.

Local opposition is a primary obstacle to the timely deployment of wind, solar, and battery storage facilities. While an ordinance codifying the conditions under which a community is willing to accept a new facility can avoid future conflicts over siting, it is most likely to be effective if that ordinance is informed by an open and inclusive process that reflects input from all segments of the community. Similarly, the best examples of floodplain and freeboard zoning ordinances have come out of long-term public engagement that thoroughly aired and addressed the concerns of residents, policymakers, and businesses, with input from experts in climate change, flood risk, and building standards.

Potential for implementation in Maryland, New York, Connecticut, and Maine

GCC next turned its attention to the practical application of these ideas in four Northeast and Mid-Atlantic states — New York, Maryland, Connecticut, and Maine. GCC first assessed the viability of enacting each ordinance in the context of state laws and regulations. With a few limited exceptions and conditions, state law in all four states allows municipal or county governments to enact the kinds of ordinances we are proposing. In some cases, local governments must consult with state agencies before establishing certain kinds of zoning ordinances, but in general, there are no legal impediments to communities in these four states pursuing these approaches.

The particular conditions in each state do present different policy and governance factors to consider when tailoring ordinances. In Maine, for example, a significant portion of the state's land area lies in “unincorporated” areas that are not directly subject to the jurisdiction of any town or city. In Maryland, counties have primary responsibility for zoning regulations, but the state classifies each county in one of three categories, with differing levels of authority. Connecticut, by contrast, does not have county-level governments, so towns and cities are the entities with authority to pass ordinances. New York has operational county and local governments, with varying levels of authority over zoning and public safety. When it comes to clean energy and data center siting questions, each of the four states reserves certain larger-scale roles — for example, approving where to site transmission lines and power plants — to be determined at the state level, but assigns specified roles for local governments and other stakeholders within those statewide siting processes.

Guidance for matching ordinances to communities

GCC then identified criteria to consider when determining whether a given community might be a good place to consider each ordinance. Each of the six issues comes with its own set of circumstances, but a few common themes thread through many of them.

A first general screen is geographic relevance. For example, the first screen we identified in selecting candidate communities for flood risk reduction ordinances is their level of potential exposure to flooding from a nearby river or coastline. In the case of MHDZEV charging stations,

proximity to major interstate roadways and interstate shipping facilities serves a similar purpose, and sufficient land to site energy or data center facilities is a geographic prerequisite for ordinances on those topics. Similarly, an existing transit network is typically a prerequisite for transit-oriented development.

A second useful screen for certain ordinances is the size of the community in question. For example, revising flood maps can be expensive, and is often out of reach for smaller towns, unless they work in coalition with several nearby communities. With that in mind, for the floodplain-related ordinances, GCC's criteria point toward mid-size communities of between 10,000 and 60,000 people.

In some cases, GCC recommends using proxies to help identify communities likely to be amenable to these changes. For example, for flooding ordinances, a community's track record of flood risk reduction actions, as measured through FEMA's Community Risk Index scores, serves as a good indicator that a local government is forward-thinking when it comes to flood protection.

Conclusions and next steps

Local ordinances can play important roles in advancing smart, effective policies to reduce greenhouse gas pollution and protect people and property from the dangerous effects of climate change. Well-designed municipal laws and regulations, developed with appropriate public engagement and equitably implemented, can be useful tools to accelerate the transitions to clean energy and lower-carbon transportation, to mitigate the climate impacts of data centers and other large loads, and to reduce the risks of catastrophic flooding. Local climate reforms can not only enable progress in the states and communities involved, they can also serve as models for other jurisdictions, inspire similar efforts across the country, and change conversations on the ground in lasting ways.

About this Research

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