



BUILDING A CLEANER FUTURE:

A GUIDE FOR LOCAL GOVERNMENT
ACTION ON BUILDING DECARBONIZATION

White Paper Prepared by Veolia and Climate Mayors





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On the cover: Madison, Wisconsin's capital, is the fastest growing city in its state. To keep up with housing needs while advancing climate action, the City is focused on adding energy efficient housing near public transit, multi-use paths, and in walkable areas.

FORWARD: EMBARKING ON LOCAL CLIMATE ACTION

Throughout the United States, towns and cities of all sizes are responding to the challenges posed by climate change by implementing solutions to reduce their greenhouse gas (GHG) footprint and address climate risks, while building a strong economy, jobs and healthy community for residents.

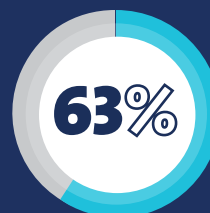
Research shows a majority of people feel strongly about protecting natural resources such as clean air and water. The 2024 Veolia “[Barometer of Ecological Transformation](#)” study surveyed people in 26 countries, including the U.S., to gauge their attitudes about climate change. It revealed that 57 percent of Americans felt “exposed and vulnerable to health risks due to worsening climate conditions.” The survey further showed that a majority of Americans remain confident that the future of humanity is still in our hands, and that meaningful steps can still be taken to reverse and mitigate impacts.

Across the country, cities and towns are establishing their own sustainability goals to proactively address climate change. According to [Climate Mayors](#) - a network of 350 mayors of cities across the U.S. who are committed to carbon reduction goals as outlined in the Global Paris Accord - mayors are implementing climate actions locally that are creating jobs, cleaning the air and improving their local economy in alignment with their goals. The goal of this building decarbonization roadmap is to provide practical steps for municipal leaders who are early in their decarbonization journey to a cleaner future.

The findings of the Barometer Survey



of Americans are certain that climate disruption is **currently happening**



of Americans are convinced that **human activity** is the main cause of climate change



of Americans feel that climate change is the **greatest health threat** facing humanity



of Americans are certain the **costs of climate disruption** will be greater than the investments needed for ecological transformation

► **Monona Terrace** – With more than 55 miles of bicycle paths, the City of Madison makes it easy for visitors and residents to commute, run errands, and explore iconic sites by bike, like the Frank Lloyd Wright–designed Monona Terrace Community and Convention Center.



THE IMPORTANCE OF BUILDING DECARBONIZATION



According to studies by the United Nations and the U.S. Department of Energy, buildings are responsible for approximately

35-40% of global GHG emissions and more than 1/3 of U.S. GHG emissions.

Including the energy used to operate buildings and the emissions generated during construction and materials production, buildings can account for almost two-thirds of emissions, as is the case in New York City.

Decarbonizing buildings has sweeping benefits beyond reducing carbon emissions, including saving taxpayers money, improving the quality of homes and businesses, improving indoor air quality and reducing the size of power grid infrastructure. Through strategies used to reduce the carbon footprint of buildings, municipalities can also enable

fast, secure and interactive distributed energy resources, like on-site solar panels, battery storage and electric vehicle (EV) charging.

The journey to achieving ambitious building decarbonization goals requires a practical approach that balances cutting carbon emissions with reducing costs for both public and private stakeholders.

This white paper aims to help municipal leaders stay on track by taking it step-by-step. It is meant for municipalities of all sizes in all geographic regions — and with different levels of funding resources at their disposal.

◀
*New York City, NY -
Skyline with View of the
Empire State Building*

BUILDING DECARBONIZATION ROADMAP

►
Boston, MA -
Skyline in Autumn

STEP ONE: SETTING GOALS AND ESTABLISHING BASELINES



Set achievable goals.



Conduct initial building assessments.

Before municipalities can begin taking action to reduce their carbon footprint, they should establish a baseline understanding of their current building emissions. It's important for municipalities to know what building decarbonization targets are realistic while still setting an ambitious and achievable goal.

As part of the baseline understanding, municipalities should conduct a thorough inventory of buildings to better grasp buildings' typologies throughout the city, including use, age, energy uses and equipment systems. Creating a baseline of data from existing buildings is critical as it provides municipalities with the information

they need to effectively set policies and programs to address building decarbonization. Municipalities should also create detailed plans outlining costs and associated impacts, which will help them build partnerships with local businesses, community organizations and state agencies to increase the likelihood of securing funding.

For example, the City of Detroit conducted a thorough inventory of over 300 city buildings, which was a necessary first step before the city could establish its building decarbonization goals, according to Maria Galarza, Deputy Director, Office of Sustainability for the city.

“We began by compiling data that was previously collected and then finished the entire building inventory, which combined the building address, electric meter, gas meter and water meter. The full inventory and dashboard took us about a year to complete because we worked with the utility company to automate all the data. With this accurate and centralized data, we are better positioned to tackle our energy efficiency goals.”



**Maria Galarza, Deputy Director,
Office of Sustainability, Detroit**

►
Detroit, MI





Detroit is committed to a
**75% reduction in
carbon emissions**

in all city-owned buildings by 2034.

The city is making progress toward its goal through various energy efficiency efforts as well as renewable energy generation through the [Detroit Neighborhood Solar Initiative](#).

Cities of all sizes understand the value of conducting baseline assessments and developing comprehensive sustainability plans. New Bedford, Massachusetts has just over 100,000 people, with one of the most active maritime ports in the country. Its innovative Office of Resilience and Environmental Stewardship has been recognized by the U.S. Environmental Protection Agency as a model for setting a clear course for the community's future. The city's [NB Resilient](#) sustainability plan, adopted in 2021, includes visionary strategies for decarbonizing both municipal and privately owned buildings, which contribute more than 60% of the city's GHG emissions.

In an interview, Michele Paul, Director of Resilience and Environmental Stewardship for the City of New Bedford, said the city's blueprint for addressing vulnerabilities in carbon emissions was what drove the plan, especially in terms of preventing the kind of warming that threatens the city's coastline. Once municipalities have completed their data-gathering efforts, she said, they can set realistic yet ambitious goals that, as much as possible, align with targets outlined in the [Paris Agreement](#), as well as state climate targets and other established benchmarks.



STEP TWO: FOCUSING ON CITY-OWNED ASSETS



Identify city-owned assets for building decarbonization.



Determine relevant and effective efficiency projects to focus on.

Municipalities are often significant land owners within their own cities, and thus are well-positioned to lead by example to advance community-wide building decarbonization goals. After gathering the necessary data, the next step for municipalities is to focus on reducing emissions from city-owned buildings. Actions towards this goal could include:

- ✓ **Developing a reliable building energy management system** for using data to measure progress, especially at points of consumption.

- ✓ **Conducting an energy audit** to identify inefficiencies that are contributing to emissions, and practical steps to address them.
- ✓ **Implementing lighting retrofits** of energy-efficient bulbs.
- ✓ **Installing energy-efficient heat** and cooling systems such as ground-source and air-source heat pumps.
- ✓ **Streamlining management of city assets** across agencies to minimize inefficiencies.
- ✓ **Dedicating resources to address more challenging sources of emissions**, such as older buildings with antiquated systems that are difficult to convert to electricity.
- ✓ **Pursuing electrification and renewable energy sourcing** to replace traditional fossil fuels for building energy needs. See Appendix A: Renewable Energy Sourcing for more information.

Municipalities often find that taking these types of actions can have a considerable impact. In Knoxville, Tennessee, for example, Mayor Indya Kincannon noted

that her city took early steps on its climate journey to limit emissions from city-owned buildings.

“When we first began looking at our situation, we assessed our buildings, our transportation, our waste, and said, ‘What’s going to have the biggest impact?.’ We realized that we have over 90 buildings in the city that are municipality-owned, so we were able to enter into an energy management contract that set strict limits on emissions. We started by taking on everything we could internally, especially when it came to building emissions. The goals we are setting for external, community buildings and housing are much harder to achieve, so we wanted to start by focusing on the assets we controlled.”



Indya Kincannon, Mayor of Knoxville, Tennessee

Knoxville’s [2021 Energy & Sustainability Work Plan](#) sets the goal of reducing GHG emissions from municipal buildings and assets by 50% by 2030, with an overall goal for reducing emissions citywide by 80% by 2050.

STEP THREE: SECURING FUNDING AND PARTNERSHIPS



Identify ways to offset costs through savings.



Seek public support to incorporate sustainability in annual budgets.



Diversify funding strategies.

Ask any municipal leader about the greatest obstacle they face in achieving their sustainability goals, and the first answer is most likely to be “paying for it.” For example, updating building infrastructure to all-electric sources or switching to air-sourced heat pumps offer a surefire way

to make a positive impact on carbon reductions and provide energy savings long-term, but they do require upfront costs. While upfront costs are important to consider, the long-term reduction of energy bills to municipalities and consumers will save taxpayer dollars and provide important community co-benefits over the life of the upgrades.

Funding Strategies for Building Decarbonization

- 1 **Self-funded projects with economic return**
- 2 **Tax-based funding**
- 3 **Grants and incentives**
- 4 **Public-private partnerships**
- 5 **Green bonds**

✓ **Self-funded projects with economic return**

In many cases, municipalities can offset the costs of building decarbonization through savings resulting from reduced use of fossil fuels over time, thereby reducing the overall energy delivery costs. In addition, some utilities partner with municipalities to offer no-interest loans repaid from the savings of implementing decarbonization projects.

An example of this kind of successful public-private partnership can be found in Lancaster, California, where the city’s partnership with a private solar vendor enables local residents and businesses to install solar energy systems at a low cost. The city also brokered a partnership with a private technology company to create an affordable solar housing community, delivering advanced battery technology and solar collectors to over 200 homes. Through these and other decarbonization efforts, Lancaster is now a net-zero electricity city.

Lancaster, CA



✓ Tax-based funding

Some cities enjoy strong public support for sustainability efforts such as building decarbonization, with taxpayers willing to support publicly funding climate action. For example, in Denver in 2020, residents voted to raise the local sales and use tax by 0.25% to create the [Climate Protection Fund](#).



Denver's Climate Protection Fund raises \$40 million annually to cut pollution equitably and protect against high temperatures, extreme weather events, poor air quality and other climate impacts, according to Katrina Managan, the city's former Director of Buildings and Homes.

“It was a citywide referendum to help us reach our overall goal of zero greenhouse gas emissions by 2040,” said Managan. Denver’s deep investment in climate goals earned it the second ranking out of 75 cities in the [American Council for an Energy-Efficient Economy's 2024 City Clean Energy Scorecard](#).

Denver’s approach could provide an achievable finance model for other cities to pursue. As a national leader in building decarbonization, Denver has been able to take advantage of federal [Climate Pollution Reduction Grant \(CPRG\)](#) funding to launch an ambitious initiative aimed at eventually transitioning existing buildings to electrical sources of energy, most notably through the installation of air-source heat pumps.

With the funding attained through the Climate Protection Fund and other federal dollars, Denver has been able to take on numerous projects to further support renewable energy projects that benefit the community, including the installation of 16 community solar gardens on municipal sites to provide clean, renewable energy for municipal and other functions. The gardens provide shade and cooling in the summer, with a percentage of solar-generated electricity directed to families in need.



Denver, CO - The Colorado State Capitol Building, (State House)



For municipalities without local funding mechanisms, they can take advantage of other funding sources, including:

- ✓ **Grants and incentives**, including the below. *Note: As of this writing in March 2025, many federal grants have been frozen and are under further review by the Department of Energy and Environmental Protection Agency.*
 - The Energy Efficiency and Conservation Block Grant program, which is funded through the Bipartisan Infrastructure Law (BIL) and administered by the U.S. Department of Energy (DOE), provides formula and competitive grant funding to states, territories, local governments and tribes for efforts such as energy-efficient retrofits and building decarbonization.
 - The Energy Efficiency Revolving Loan Fund Capitalization Grant Program, funded through the BIL and administered by the DOE, provides grants to states to establish revolving loan fund programs that can be used for building decarbonization.
 - The U.S. Greenhouse Gas Reduction Fund, funded through the Inflation Reduction Act and administered by the U.S. Environmental Protection Agency, provides financing for clean energy and decarbonization projects across the country. C40 Cities, in partnership with Climate Mayors and USDN, released a GGRF guide for local governments in February 2025.

- ✓ **Public-Private Partnerships (P3s)**, in which private companies help finance and implement decarbonization projects.
- ✓ **Green bonds**, which can be issued to raise capital for sustainability projects.

Successful projects often mitigate financial risk through a blend of public, private and philanthropic financing in the form of both grants and loans. Cities can identify relevant opportunities at the federal level by regularly monitoring websites like Grants.gov to identify funding sources that best support their goals.

To make the biggest impact in funding applications, municipalities can also seek technical assistance from state or federal agencies or nonprofit organizations to optimize the application's design and ease of navigation.

▶
Denver, CO - Denver skyline in front of the Rocky Mountains.



STEP FOUR: CREATING POLICY INCENTIVES



Set clear policy guidelines.



Explore ordinances or referendums to publicly codify objectives.



Communicate policy goals to get buy-in from key stakeholders.

Adopting clear policies is one of the most important tools local governments have to implement building decarbonization across their community. Policies outline the city's sustainability expectations, priorities and action plans. Municipalities should also consider public reporting requirements as part of their policy actions, which allows all stakeholders to be fully aligned while also holding all relevant parties accountable.

Policy options for municipalities could include:

- ✓ **City ordinances:** Many municipalities have adopted — or are considering adopting — ordinances that restrict or limit emissions for new construction or require retrofits to existing buildings, such as building performance standards policies or IECC codes. For example, the City of Seattle passed new [building codes](#) that require electric heating in new commercial, large multifamily and municipal buildings. Passing city ordinances requires building broad coalitions of support across community stakeholders. Mayors should assess the right tools to use based on the willingness of local stakeholders and whether or not there are [formalized or threatened preemption laws](#) against municipal policy in their state.
- ✓ **Incentives and fees:** Municipalities can incentivize building owners to pursue energy efficiency solutions by imposing fees and/or providing tax incentives. When developers are proposing new construction, municipalities can offer tax incentives to encourage them to adopt sustainability measures, often in conjunction with other solutions such as including affordable housing units.
- ✓ **Green building recognition:** Municipalities can encourage building owners to engage in sustainable practices by publicly recognizing them for taking steps to decarbonize. One example is the U.S. Green Building Council's [LEED Certification Program](#).
- ✓ **Reporting:** Municipalities can require reporting on building energy emissions, setting benchmarks for buildings based on square footage. This approach often goes hand-in-hand with adopting ordinances that impose penalties on building owners who do not meet reporting requirements, such as the [Building Energy Use Disclosure Ordinance \(BEUDO\)](#) in Cambridge, Massachusetts. The ordinance imposes aggressive fines on owners who do not meet reporting requirements according to a scheduled timetable. Other examples of ordinances that require reporting include [Local Law 97](#) in New York City and the [Building Emissions Reduction and Disclosure Ordinance \(BERDO\)](#) in Boston, Massachusetts.

Boston is a national leader in applying policy guidelines and incentives to reduce energy emissions in privately owned buildings, one of the more difficult decarbonization goals to achieve. Other innovative steps the city has taken towards a solution include:

- ✓ **Issuing an executive order banning fossil fuel use** in new municipal construction and major renovations.
- ✓ **Amending the City's zoning code to include a Net Zero Carbon Zoning Policy**, which will go into effect in July 2025 and requires new large buildings to meet net-zero carbon emissions standards.

Boston's Net Zero Carbon Zoning Policy will require all new large buildings to 1) meet net-zero carbon standards from Day One; and 2) report on embodied carbon, which is the total amount of GHG emissions that occur during the lifecycle of a building. The city views the policy as a critical step in ensuring that buildings currently under construction won't need costly retrofits later to meet evolving climate goals. By integrating these considerations into the city's zoning code, Boston is setting a clear path to zero carbon.

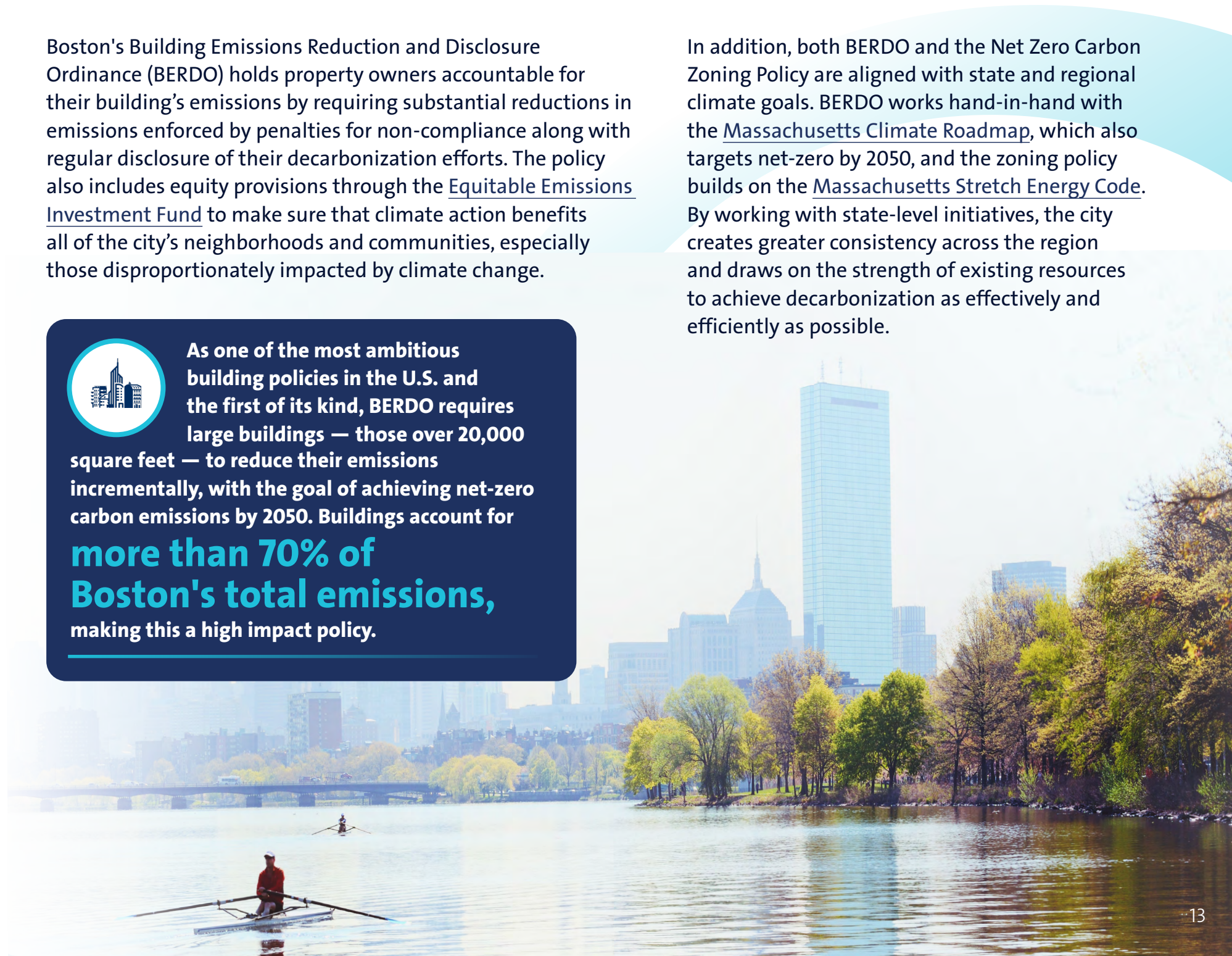
Boston's Building Emissions Reduction and Disclosure Ordinance (BERDO) holds property owners accountable for their building's emissions by requiring substantial reductions in emissions enforced by penalties for non-compliance along with regular disclosure of their decarbonization efforts. The policy also includes equity provisions through the Equitable Emissions Investment Fund to make sure that climate action benefits all of the city's neighborhoods and communities, especially those disproportionately impacted by climate change.



As one of the most ambitious building policies in the U.S. and the first of its kind, BERDO requires large buildings — those over 20,000 square feet — to reduce their emissions incrementally, with the goal of achieving net-zero carbon emissions by 2050. Buildings account for **more than 70% of Boston's total emissions**, making this a high impact policy.

In addition, both BERDO and the Net Zero Carbon Zoning Policy are aligned with state and regional climate goals. BERDO works hand-in-hand with the Massachusetts Climate Roadmap, which also targets net-zero by 2050, and the zoning policy builds on the Massachusetts Stretch Energy Code. By working with state-level initiatives, the city creates greater consistency across the region and draws on the strength of existing resources to achieve decarbonization as effectively and efficiently as possible.

▶ **Boston, MA** - Boston skyline on a foggy morning.



Ambitious efforts such as those found in Boston require buy-in across a broad range of stakeholders, which can be more difficult to attain in some cities than others. It's critical that mayors work to bring together key stakeholders such as elected leaders, municipal officials, labor groups and community leaders when setting policies and plans for building decarbonization.

In particular, many municipalities that have been able to make great strides on their climate journeys were able to do so with political support from their constituents and, in some cases, their state government. In areas where there is low political support for building decarbonization, either at the local or state level, the challenges can be greater.

Knoxville's Mayor Kincannon noted that when creating a broad coalition of support, it's important to focus on the economic impacts of building decarbonization, as her constituents tend to favor those policies.



Indya Kincannon, Mayor of Knoxville, Tennessee

"If we talk more about how this can result in lower utility bills or energy savings, we get more buy-in."

Knoxville, TN - Downtown Knoxville with view of the Knoxville Sunsphere.



In densely populated regions with multiple urban centers, such as the California Bay Area, communities have found it critical to form strong partnerships with each other to implement regional sustainability goals. In San Mateo County, home to tech giants such as Meta, a consortium of cities have joined the nonprofit [Peninsula Clean Energy](#) to increase their sustainability impact across several fronts, including buildings and transportation.

"The demands for sustainability measures are so great that we needed to centralize our efforts."



**Councilmember Colson, former
Mayor of Burlingame, California**

Councilmember Colson said PCE's [EV Ready Program](#) provides rebates to apartment building owners that want to install charging stations, incentivizing the market to take steps to decarbonize. This encourages new buildings to plan for electrical systems that support EV charging, promotes further adoption of electric vehicles in the city by making it easier for renters to access chargers, and contributes to overall carbon emission reduction strategies.

▶
**Burlingame, CA -
Community Center**



STEP FIVE: DEVELOPING YOUR CITY'S WORKFORCE



Align sustainability goals with job growth opportunities.



Engage with disadvantaged communities.



Explore partnerships with trade unions and nonprofits.

Transitioning to a clean economy means more clean energy jobs and a need for more workforce development programs. According to LinkedIn's 2024 [Global Green Skills Report](#), the demand for trained personnel in green-focused jobs is far outpacing supply, with demand in the U.S. increasing by 9.8 percent from 2023 to 2024, and supply increasing by only 3.1 percent.

Efforts to address the "green skills gap" can begin in a number of ways — whether it's job-specific training, apprenticeship programs, or STEM programs and coursework in public schools and local universities.

Many municipalities have made it a high priority to ensure that low-to-medium income communities benefit from decarbonization strategies. Community nonprofit partners, community colleges and the trades play a central role in training and development for certain clean energy jobs. Municipalities can accelerate community buy-in for building decarbonization initiatives by implementing a stakeholder review board with local housing authorities and nonprofit organizations, in which everyone participating can be part of the process and monitor progress.

In Detroit, the city's sustainability efforts aim to involve several local trade unions, said Deputy Director Galarza, including locals representing carpenters, millwrights and electricians. The city and the unions are mutually invested in creating opportunities in the electrification of buildings and vehicles.

"It's a process that will require all of the trades for things like solar panel installation. We're at this sort of magic moment where everyone is aligned."



**Maria Galarza, Deputy Director,
Office of Sustainability, City of Detroit**

Workers installing solar panels on a commercial rooftop.



Other cities have had similar success at linking green job opportunities to long-term goals such as improved housing. In Madison, Wisconsin, the city's Community Development Division is working with local and state housing agencies, including the Wisconsin Housing and Economic Development Authority, to increase the supply of sustainable, affordable housing. Madison's Affordable Housing Fund provides grants and gap financing to support development projects that increase, preserve or improve the supply of affordable rental housing for low-income households. To receive funding, projects must participate in [Focus on Energy's Design Assistance Program](#), reduce the building's energy use by 20 percent below the state's energy code minimums and include rooftop solar. This program helps meet the city's decarbonization targets while creating job opportunities in sustainable construction and renovation.

"These types of collaborations with multiple stakeholders are key to building the job force we need to meet our sustainability goals."



**Jessica Price, Sustainability and Resilience
Manager for the City of Madison**

▶ **New Housing** – The City of Madison has set the ambitious goal to support the creation of 15,000 new homes, like this apartment building, by 2030.



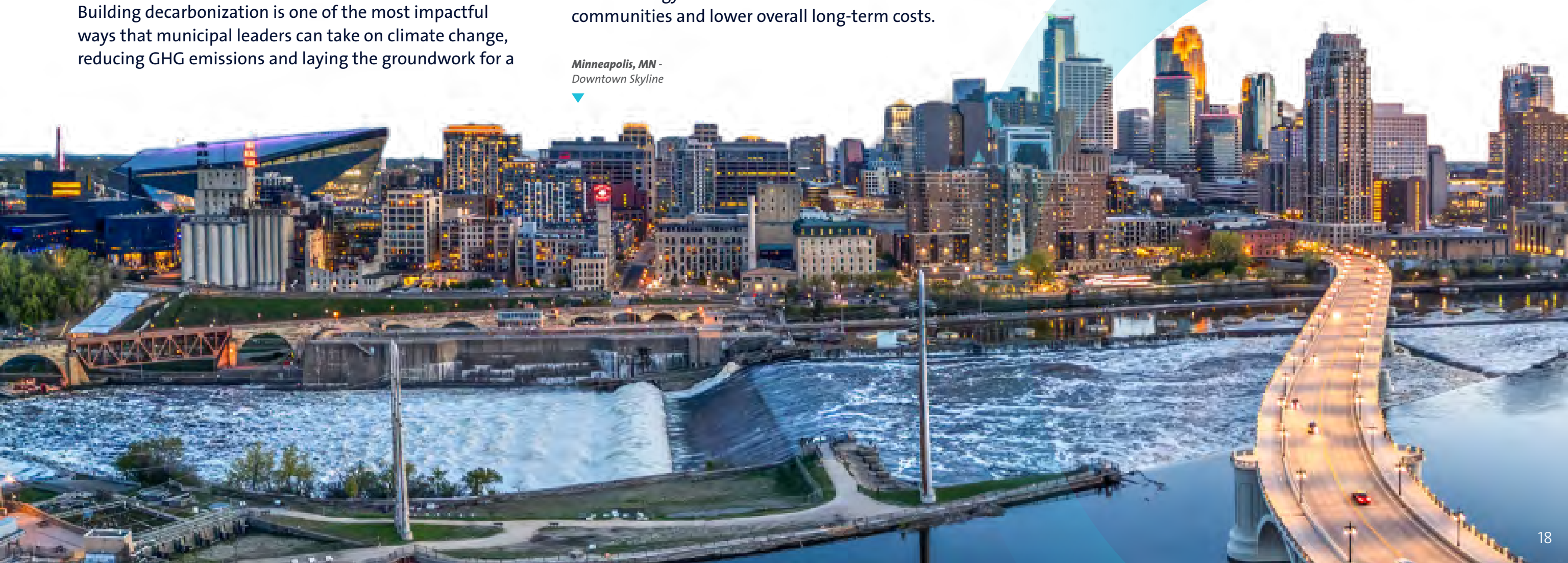
CONCLUSION: TAKING THE NEXT STEP

As the impacts of climate change become increasingly severe and frequent, the need to reduce our carbon emissions is becoming more critical by the day. Municipalities across the U.S. are playing a leading role in implementing building decarbonization solutions to address this need.

Building decarbonization is one of the most impactful ways that municipal leaders can take on climate change, reducing GHG emissions and laying the groundwork for a

sustainable future. This guide provides local governments with clear and actionable steps for making tangible change in their communities when it comes to building decarbonization efforts. Through these policies and programs, cities can also drive resident engagement, reduce energy burdens for low- and medium-income communities and lower overall long-term costs.

*Minneapolis, MN -
Downtown Skyline*



APPENDIX A: RENEWABLE ENERGY SOURCING

Advances in technology are making it easier than ever to use renewable fuels to replace traditional fossil fuels to meet building energy needs. The "greenness" of these fuels varies depending on their production

methods and feedstocks, so lifecycle assessments are often used to determine their overall environmental impact. Here is a breakdown of the emerging green fuels solutions that municipalities may consider:

Carbon intensity measures GHG emissions associated with producing and consuming fuel. It is measured in grams of CO₂ equivalent per megajoule of energy (gCO₂e/MJ). The lower the carbon intensity, the more "green" the fuel is.

Diesel Fuel Carbon Intensity: 80 to 95 gCO₂e/MJ
Heating, industrial & transportation fuel

Gasoline Carbon Intensity: 95 to 100 gCO₂e/MJ
Transportation fuel



SOLUTION: SOLAR ELECTRIC CARBON INTENSITY: 8.3 TO 22.2 gCO₂e/MJ

Definition: Solar electric generation, also known as solar power or photovoltaic (PV) power generation, is the process of converting sunlight directly into electricity using semiconductor materials.

Use Case: A suitable location, close to where electricity is needed and sunlight is present, is found for solar panels and ancillary electric infrastructure. Certain materials used in the panels are activated by sunlight, known as the photovoltaic effect, producing an electric current. The most prominently used types of locations include building rooftops, car park shelters, open fields for ground-based installation — where the value of alternate land use does not exceed the value of the electric generation.

Example: City of Arvin, California construction of solar field at an agricultural water treatment plant.



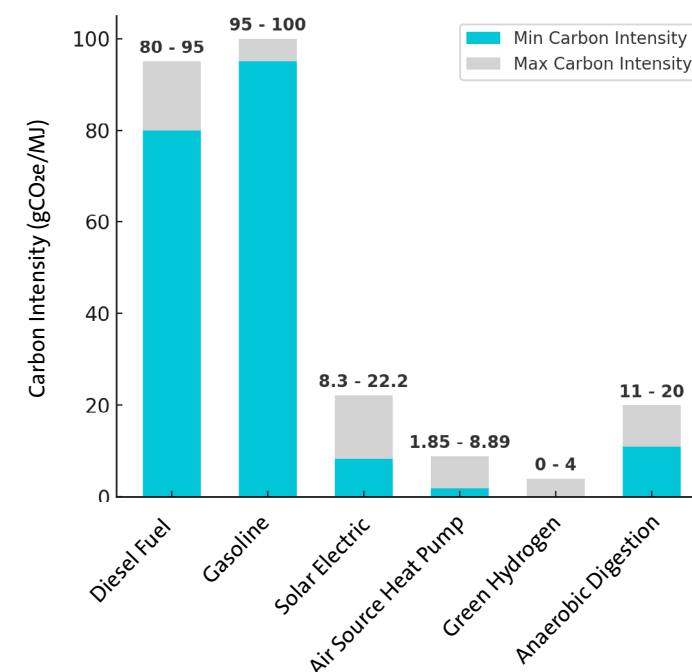
SOLUTION: AIR SOURCE HEAT PUMP CARBON INTENSITY: 1.85 TO 8.89 gCO₂e/MJ

Definition: An air source heat pump (ASHP) is a heating and cooling system that transfers heat between the inside of a building and the outside air. It operates on the principle of vapor compression refrigeration cycle, similar to a refrigerator or air conditioner, but can work in both directions. The ASHP uses the outside air as the heat source in heating mode and as the heat sink in cooling mode.

Use Case: All buildings requiring heating and/or cooling for occupancy. ASHPs can also be used to heat and cool fluids such as swimming pool water.

Example: City of Burlingame, California, where the city arranged to install ASHPs for heating and cooling the public pool.

CARBON INTENSITY OF VARIOUS ENERGY SOURCES



View of a Solar Field

APPENDIX A: RENEWABLE ENERGY SOURCING



SOLUTION: GREEN HYDROGEN CARBON INTENSITY: 0 TO 4 GCO₂E/MJ

Definition: Hydrogen is produced through electrolysis of water, using renewable electricity sources like solar or wind power.

Use Case: Erect a wind turbine that generates electricity, feed water to an electrolyzer, separate, capture and store the hydrogen. Fuel motor vehicle with hydrogen instead of gasoline.

Example: Hydrogen/natural gas fueling station project in Town of Hempstead, New York, Jones Beach Patrol

Green Hydrogen Concept



SOLUTION: ANAEROBIC DIGESTION CARBON INTENSITY: 11 TO 20 GCO₂E/MJ

Definition: Anaerobic Digestion (AD) is a biological process in which microorganisms break down organic matter without oxygen.

Use Case: City sewerage systems centrally collect sewer flows from buildings to a Wastewater Treatment Plant (WWTP). The WWTP sends concentrated sewage into a Digester, where microorganisms break down and consume the solid and semi-solid biologic material and emit methane. The plant separates, captures and stores the methane for use in an electric generator, motor vehicle engine, heating plant or other industrial use.

Examples: Municipal wastewater treatment facilities, such as in the City of Great Falls, Montana; food waste processing plants in other municipalities.

APPENDIX B: **ADDITIONAL RESOURCES**

[Zero Emission Building Ordinances, Building Decarbonization Coalition.](#)

[Growing the Workforce Needed for Building Retrofits: A Guide for U.S. Cities, C40 Cities.](#)

[Guidelines for Creating Community-Driven Building Retrofit Programs, C40 Cities.](#)

[U.S. Building Sector Decarbonization Scenarios to 2050, Berkeley Lab.](#)

[Building Decarbonization Roadmap: Summary of Strategies, United States Climate Alliance.](#)

[Equitable Building Electrification: A Framework for Powering Resilient Communities, The Greenlining Institute](#)

[Regulatory Solutions for Building Decarbonization: Tools for Commissions and Other Government Agencies, Rocky Mountain Institute](#)

[How Local Governments and Communities are Taking Action to Get Fossil Fuels out of Buildings, Rocky Mountain Institute](#)

[Seeking Federal Funding: A Guide for Local Governments, Urban Sustainability Directors Network](#)

About Climate Mayors



Since 2014, Climate Mayors, a politically bipartisan network of more than 350 U.S. mayors and municipal climate officers, has played a leading role in helping communities embark on their journeys to greater sustainability, from vision to goal-setting to action planning and implementation.

About Veolia North America



A subsidiary of Veolia group, Veolia North America (VNA) has been the top-ranked environmental company in the United States for the past four consecutive years (2021-24), and the country's largest private water operator and technology provider as well as hazardous waste and pollution treatment leader. It offers a full spectrum of water, waste and energy management services, including water and wastewater treatment, commercial and hazardous waste collection and disposal, energy consulting and resource recovery. VNA helps commercial, industrial, healthcare, higher education and municipality customers throughout North America. Headquartered in Boston, Veolia North America has more than 10,000 employees working at more than 350 locations across the continent.

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