



Mayors Climate Protection Center

Taking Local Action

Mayors and Climate Protection Best Practices

June 2019

13th Anniversary Winners
Mayors' Climate Protection Awards



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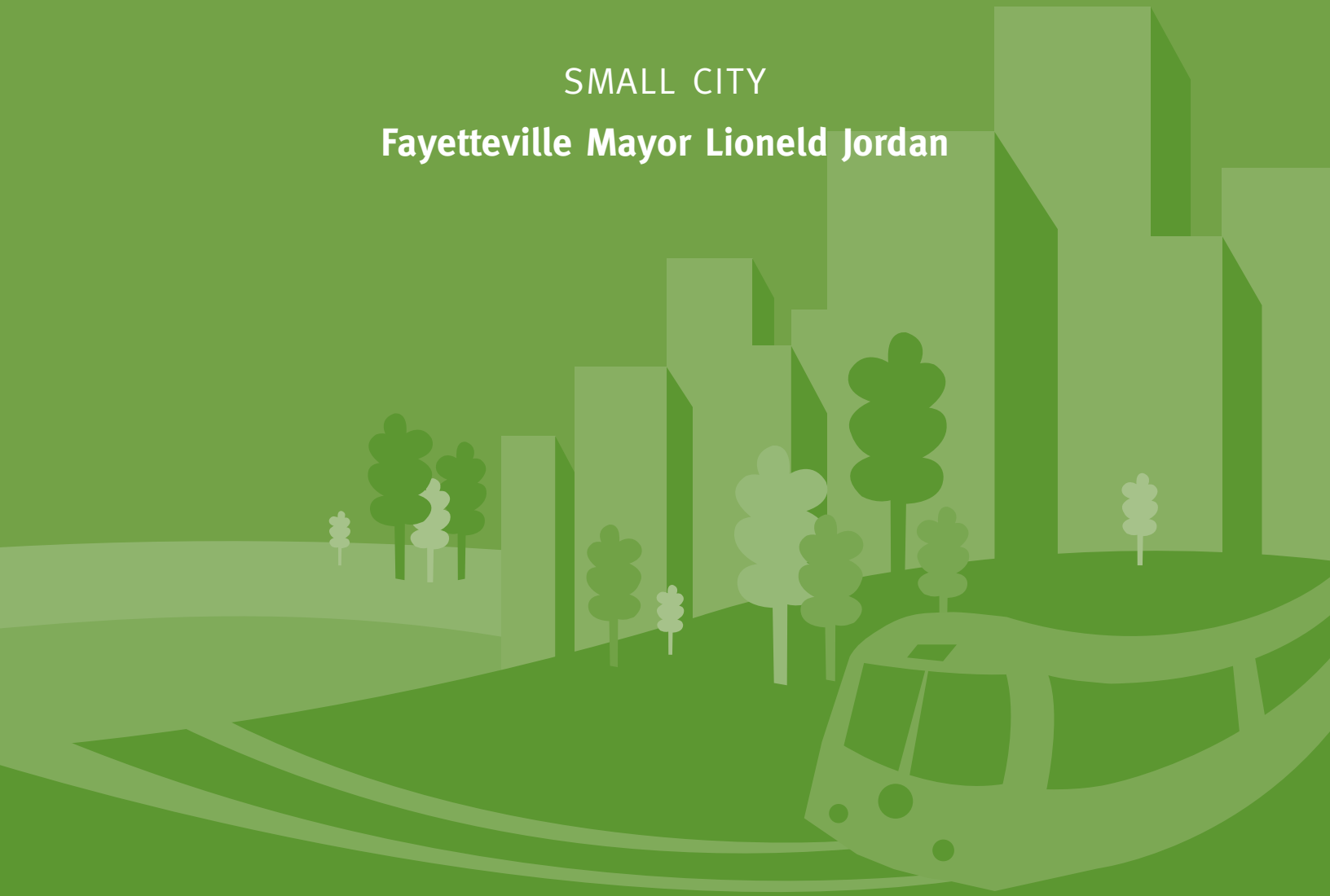
First Place Award Winners

LARGE CITY

Los Angeles Mayor Eric Garcetti

SMALL CITY

Fayetteville Mayor Lioneld Jordan



Los Angeles Mayor Eric Garcetti

Electric Vehicle Purchasing Collaborative

The Climate Mayors Electric Vehicle Purchasing Collaborative was launched by Mayor Eric Garcetti in September 2018 in partnership with Climate Mayors, a network of 425 American mayors committed to upholding the Paris Agreement. The Collaborative is the first platform to help American cities rapidly electrify their municipal fleets by leveraging the collective buying power of cities to lower costs of procurement – sending a powerful signal to the global auto market that cities are ready and willing to buy electric vehicles.

This turnkey, one-stop, online portal lowers administrative barriers for cities looking to electrify their municipal fleets by offering them access to a single, competitively bid contract – providing cities with equal access to pricing for electric vehicles, charging infrastructure, and technical support.

The Collaborative was developed with two key partners: Electrification Coalition, the lead organization providing cities with expert guidance and technical support on transitioning their fleets; and Sourcewell, a cooperative purchasing organization offering specialized procurement services.

In the first eight months of the program, 125 U.S. cities and 9 counties have committed to purchasing 1,926 electric vehicles before the end of 2020. Los Angeles has committed to 130 EVs over that timeframe, with 126 already on order. The Collaborative has announced an upcoming competitive bid for electric school buses by the end of the year, and will continue to scale through the addition of medium and heavy-duty EVs.

In January 2017, Los Angeles worked with 29 other cities to pool each city's municipal vehicle fleet data in order to release an Electric Vehicle Request for Information (EV RFI) to automakers, demonstrating demand for over 114,000 vehicles, trucks, and equipment – which built the foundation for the creation of the Collaborative.

Transportation is the largest and fastest-growing source of U.S. greenhouse gas emissions. By leveraging the buying power of Climate Mayors' cities, the Collaborative works to accelerate the electrification of local fleets and have a distinct market impact – helping America maintain its commitment to the Paris Climate Agreement.

The 1,926 vehicles committed through the Collaborative to date will save approximately 6,000 metric tons of CO₂ annually.

Currently, Los Angeles has approximately 800 electric vehicles in its municipal fleet, which saves \$220,000 in fuel costs and reduces approximately 1,170 metric tons of carbon dioxide annually. Decarbonizing all of L.A.'s on-road transportation by 2050 will reduce 36 million tons of greenhouse gas emissions and prevent 980 premature deaths and 400 respiratory and cardiovascular hospital admissions annually, saving \$9.5 billion in reduced health care costs.

Fayetteville Mayor Lioneld Jordan

Wastewater Solar Power and Storage

The City of Fayetteville is collaborating with Ozarks Electric Cooperative and Today's Power, Inc. (TPI) to break ground on Arkansas' largest solar power system on municipal land, and the only one in the state with onsite utility-scale storage. This solar energy project is expected to raise the share of clean energy consumed by the city government from 16 percent to 72 percent, while saving the city approximately \$6 million over 20 years.

In adopting its Energy Action Plan in 2018, the City of Fayetteville created the framework to guide efforts to reduce greenhouse gas emissions and become more energy efficient. One key action item of this Plan was the city achieving 100 percent clean energy by 2030. Currently, the city's energy consumption is 16 percent clean energy, with some purchased from the electrical grid and some generated directly by power arrays at city buildings (e.g., solar arrays on the roofs of the District Court building and at the Fayetteville Public Library).

Like most cities, wastewater treatment (at its two plants) is the city government's largest user of electricity, accounting about two-thirds of total demand. New solar arrays on two city-owned properties will soon generate approximately 18.3 million kWh/yr of clean energy, offsetting about 103 percent of the city's wastewater treatment usage, raising the city's clean energy use from the current 16 percent to 72 percent. This new clean energy production is expected to reduce the city's carbon footprint by 10,245 Metric Tons of CO₂ equivalent GHG emissions annually.

This program is the result of a tri-lateral agreement among the City of Fayetteville, a regional solar developer (Today's Power, Inc.), and a cooperative utility company (Ozarks Electric Cooperative). The agreement allows the city to access and direct incentives that help bring the Return on Investment or ROI down to 3.9 years. In addition to being the largest municipal solar project in Arkansas, it is the only municipal solar project in the southeastern U.S. with an onsite utility-scale battery storage component.

Total capacity at the two locations is 10 megawatts of solar power generation and 24 megawatt-hours of battery storage, covering a combined landmass of 87 acres. For maximum solar exposure, solar photovoltaic arrays will be installed with a sun tracking system, producing 15 percent more electricity than stationary mounts. When the electricity produced exceeds demand, the overage will either be net metered to Ozarks Electric or saved to the on-site battery storage systems. An important feature of this battery system is that it enables Ozarks Electric to draw upon this stored electricity during peak use periods in lieu of purchasing electricity from others to meet its customer demand.

The city's initial financial commitment, which was funded by the Water/Sewer Reserve Fund, was \$717,000 for improvements to connect the solar arrays to its two treatment plants. The more costly solar capital investment was borne by Today's Power, Inc, supported by the city's long-term commitment to purchase the output of the new solar systems – \$0.048 per kWh over 20 years.

This solar partnership project is a critical part of the city's efforts to achieve its long-term GHG reductions goals and its 100 percent clean energy by 2030 commitment as established in the Energy Action Plan. Full implementation of this plan will improve local resilience, promote clean air and water, and achieve greater energy independence. This plan also addresses the anticipated local effects of climate change, energy efficiency efforts, and clean energy production.

Fayetteville's Energy Action Plan is the first to be adopted in the State of Arkansas. For more information about the tri-lateral agreement, the solar power generation and battery storage project, or the Energy Action Plan, please visit this webpage: www.fayetteville-ar.gov/energyactionplan.

Large City Honorable Mentions

POPULATION OVER 100,000

Boston Mayor Martin J. Walsh

Dallas Mayor Michael Rawlings

Minneapolis Mayor Jacob Frey

New York City Mayor Bill de Blasio

Salt Lake City Mayor Jacqueline Biskupski



Boston Mayor Martin Walsh

Citizen Action Supports Boston's Climate Goals

Boston's "Greenovate Leaders and Ambassadors Program" trains community members to spur direct climate action within their social networks. Leaders attend a three-hour workshop to review core presentation materials on the city's climate and energy programs and learn how to customize it to reflect their communities' needs and interests. Supported by stipends, these leaders host their own conversations and events on climate action, and report results to the city. Ambassadors are residents who make a longer-term commitment, organizing projects around Boston's climate goals, and help facilitate trainings for leaders.

Launched in 2017 as "Climate Ready Boston Community Leaders," the program set out to raise awareness of the city's newly-adopted climate preparedness plan and engage more residents, particularly in vulnerable neighborhoods, to take direct climate action. Previous initiatives had shown that residents are often the most trusted messengers for this information. In 2018, after feedback from participants and Mayor Walsh's new goal of carbon neutrality by 2050, the program, renamed "Greenovate Boston Community Leaders," expanded to include an emphasis on individual actions that reduce carbon emissions, energy use, and waste while also preparing for climate change impacts.

The city used its environmental newsletter, social media and more general communications outlets, including outreach efforts by partner organizations, to recruit future leaders and ambassadors, with 300 individuals receiving training in two years. To make the complexity of climate analyses and plans accessible, city program staff worked with a non-profit communications group – Climate Access – to develop a model, customizable presentation and script. More recent efforts are focused on recruiting participants from non-English-speaking communities.

The Leaders and Ambassadors Program helps residents take climate action that is most appropriate for them, utilizing existing pathways for action that include: Prepared City; Smart Energy City; Mobile City; Zero Waste City; and Connected

City. Although direct measurement of the GHG reductions are not possible, the city has seen active engagement and participation, as nearly 300 people in four cohorts have been or are going through the training and have held events with over 1500 attendees. The city plans a fifth round of training for this fall to meet demand.

The Leaders and Ambassadors program is innovating in ways to connect climate action to individual and neighborhood engagement. It starts by recognizing the seriousness and capability of Boston residents to communicate effectively the core information, goals, and resources of climate action. The city then supports that communication with accessible information designed to be creatively customized, and with staff and financial resources that assist participants in reaching out to their communities in the ways they know best. Finally, the program creates a network of people in the neighborhoods who can share stories with each other and with city staff that help improve policies and programs to produce more effective action, and more direct climate action by city residents. While there are many positive benefits of this initiative, one key outcome is residents and neighborhoods feel empowered by assuming the responsibility of learning, communicating, and undertaking climate action.

The City of Boston, for its part, continues to investigate and demonstrate methods and policies as it works to achieve its 2050 goal of a zero-carbon economy and brace for the impacts of a changing climate. Among these is its Smart Utilities Policy, which was adopted last year (June 2018). Specifically, Boston's Planning & Development Agency's Smart Utilities Policy for Article 80 Development Review requires proponents of new developments of 1.5 million square feet to submit a technical and financial feasibility assessment for advanced energy systems, including a district energy microgrid.

If the Smart Utilities Program Steering Committee and the Interagency Green Building Committee determine that an advanced system is feasible, developers must produce a District Energy Microgrid Master Plan, which coordinates the phasing-

in of the energy system with the phasing-in of the development. Other aspects of the policy call for installation of adaptive traffic-signal technology, green infrastructure, telecom utilidors, and smart-ready street lights.

Boston's requirement for large developments to study and install district energy microgrids is a first in the country. By addressing the concrete technical, legal, regulatory, and financial issues associated with private, multi-user local energy systems, it will provide a model for others.

Another initiative that speaks directly to the city's readiness to respond to rising sea levels is Mayor Walsh's Resilient Boston Harbor Plan, which brings together climate resilience solutions for Boston's 47-mile coastline. Last year, Mayor Walsh described this way, "It's a system not of barricades but of beaches—and parks and trails and open spaces—that are elevated to block floods and enhanced to unlock opportunity. It calls for 67 acres of new open space and 122 acres of revitalized open space on our waterfront. It links to our Emerald Necklace and reflects the same values of public health, public access, and world-class design. It's a vision of a city more connected to our waterfront—and to each other." When fully implemented, the Resilient Harbor Plan will protect Boston from the 100-year flood with 40 inches of sea-level rise.

Dallas Mayor Michael Rawlings

Green Energy Policy

The City of Dallas' *Green Energy Policy* is a climate stewardship policy committed to promoting clean and efficient energy. Effective April 10, 2019, this policy mandates the use of 100 percent renewable energy for municipal operations, implementing on-and-off site renewable energy projects, charting the path towards emissions reduction goals and ensuring a healthier environment for its citizens. Accordingly, the Green Energy Policy promotes partnerships and renewable energy projects to reduce emissions and environmental impacts, making Dallas a cleaner, healthier city to live.

While the City has been committed to 100 percent renewable energy through energy credits since 2015, the formal Green Energy Policy evolved through City Council's desire to go farther towards supporting greater community resiliency and supporting the 2017 Climate Mayor's pledge on compliance with the Paris Climate Agreement. The city hosted the inaugural North Texas Climate Change Symposium in 2018, bringing together national and local leaders and scientists for a discussion on climate change and how local governments can move toward greater energy efficiency, becoming better stewards of resources through municipal operations. This event was hosted again in 2019, adding additional speakers and workshops.

The biggest challenge in implementing the Green Energy Policy was the perception that green energy was not cost effective. When the city initially implemented its goal of 100 percent renewable energy credits in 2015, there were limited options available so the city had to work closely with energy providers to put additional programs into place. As a result, the City of Dallas today is achieving its goal of 100 percent renewable

energy through onsite generation, co-generation on wastewater treatment, greenhouse gas capture, and the purchase of renewable energy credits (RECs).

These activities resulted in a 68 percent reduction in municipal greenhouse gas (GHG) emissions from 1990 levels by 2017, exceeding a strategic goal of a 39 percent reduction. The Green Energy Policy continues to be instrumental in encouraging further greenhouse gas emission reduction efforts and embedding healthy environment standards into city operations.

The Green Energy Policy is the first official, documented policy enacted by the city recognizing the importance of energy and climate emissions reduction. The City of Dallas currently has the "greenest council in Dallas' history," and is dedicated to improving air quality, reducing carbon emissions, and creating a more resilient city.

The City of Dallas initiated its transition to 100 percent renewable energy usage with several projects supported by Energy Efficiency and Conservation Block Grant (EECBG) funding provided to the City, and continues today in part through the purchase of renewable energy credits.

By reducing the use of fossil fuels in meeting the city's energy needs, the quality of life for residents has improved as a result of the reduction in harmful pollutants, which negatively impact public health and also contribute to high levels of ozone in the North Texas region. Additionally, by promoting the use of renewable energy, the City of Dallas has provided a good example for businesses and individual residents to also make the switch to renewable energy sources.

Minneapolis Mayor Jacob Frey

Climate Change Environmental Justice Initiatives

The City of Minneapolis's Climate Change Environmental Justice Initiatives drive climate change work while addressing inequity. The focus is on climate change, economic inclusion, and housing affordability in the most environmentally and energy burdened areas of Minneapolis. Low-income communities, Indigenous communities and communities of color in Minneapolis experience unequal health, wealth, employment, and education outcomes, and also are overburdened by environmental conditions such as traffic and stationary pollution sources, brownfield sites, blight and substandard housing. In order to reduce inequity and fight climate change the City of Minneapolis designated two Green Zones. The Green Zone initiatives leverage technical assistance, incentives, and financing to support projects that account for hundreds of thousands of dollars annually in savings for our citizens most in need, while lowering the city's carbon footprint, and preserving affordable housing.

Specific city services include –

- **Lead and Healthy Homes Weatherization:** Through the Mayor's franchise fee funded climate change work, all families with high potential for lead exposure and poor indoor air quality have access to the Lead and Healthy Homes weatherization programs.
- **4D Naturally Occurring Affordable Housing:** A funding match of up to 90 percent may be provided by city and utilities for energy efficiency projects in multi-family buildings where owners commit to 10 years of affordable rents in exchange for reduced property taxes. The energy efficiency upgrades cut costs for tenants and owners in buildings helping to keep energy and rent costs down and more affordable for the residents.
- **Environmental Technical Assistance Program (E-TAP):** Technical and administrative assistance (e.g., energy audits and utility and city incentive coordination) is directed to businesses in under-served communities.
- **Green Cost Share:** Match of 30 percent provided by city for energy efficiency and renewable energy projects with added bonuses for buildings in Green Zones.

These programs give Minneapolis a comprehensive approach to fighting injustice and inequity by not only preserving affordable housing, but also targeting clean energy funding to areas with higher energy, pollution, and socioeconomic burdens.

As programs to reach ambitious climate change goals are advanced, the city wanted to be intentional about adopting approaches to address inequity at the same time. Prioritizing environmental justice work requires real investments, coordination, and commitments from city officials and staff, community members, and energy experts. It took a year of stakeholder meetings and feedback sessions to ensure that programs would effectively address community needs and help the city advance its climate action goals. In part, this prioritization and engagement also helped secure enactment of a dedicated utility franchise fee that generates revenues to support these activities.

Projects in Green Zones or 4D properties are estimated to have saved more than \$320,000 on energy bills in the last year alone. This includes savings from the about 2 MW-DC of solar producing more than 2,400 MWh annually, and the 1,548 MWh and 4,388 dekatherms saved through energy efficiency projects.

These savings help insulate low-income families, small businesses and non-profits, from future energy price increases. Of the 86 properties participating in the energy saving programs, 79 are considered small businesses, multifamily rental, single family, or non-profits. Residential properties include over 869 income-qualified families living in newly efficient buildings.

The projects, cumulatively, have also reduced pollutants connected to more immediate pollution and air quality health concerns. In 2019, it is estimated that these projects will eliminate over 33,000 additional pounds of criteria air pollutants, including particulate matter and volatile organic compounds.

Many climate solutions, including energy efficiency and solar energy projects, require large upfront investments, which can pose an insurmountable barrier to moving forward. Recognizing this, the city directed its resources to areas of inequity, catalyzing change by helping residents and property owners overcome

technical and financial barriers. In turn, these projects increase the prevalence of energy efficiency and renewable energy in environmental justice areas. The funding source underpinning many of these efforts is a pollution fee and a negotiated utility franchise fee, which demonstrates the city's intention to be proactive on climate change.

While the city's efforts rely principally on two reoccurring funding sources – its 0.5% utility franchise fee and the Health Department's Pollution Control Annual Registration fee, it has also uses funds it has received grants from the U.S. Department of Energy's (DOE) Energy Efficiency and Conservation Block Grant, Minneapolis Foundation, and the Minnesota Pollution Control Agency.

Finally, these environmental justice initiatives stand out as a model of a multi-departmental, community-lead commitment to tackle climate change, efforts relying on feedback and expertise of the community, including the Clean Energy Partnership, Energy Vision Advisory committee and Southern and Northern Green Zone committees.

New York City Mayor Bill de Blasio

Climate Mobilization Act

In May 2019, New York City passed the *Climate Mobilization Act*, a package of laws that represents one of the most ambitious legislative actions taken by any major U.S. city to date to reduce greenhouse gas emissions and create new green jobs.

The centerpiece of the *Climate Mobilization Act* is the “Buildings Emissions Mandate” – Local Law 97 of 2019 – which requires New York City’s largest buildings to take significant carbon-cutting measures, with compliance and enforcement beginning in 2024. New York City is the first city in the world to implement this kind of policy, which sets emissions caps for buildings larger than 25,000 square feet, which will cut their carbon emissions at least 40 percent by 2030 and over 80 percent by 2050. The law is applicable to 50,000 buildings and will eliminate 6 million tons of greenhouse gas emissions by 2030, the equivalent of taking 1.3 million cars off the road each year.

In New York City, buildings are responsible for nearly 70 percent of all greenhouse gas emissions. Thanks to voluntary programs like New York City’s Carbon Challenge, many buildings have taken significant steps to decrease energy consumption and reduce their contribution to climate change. However, voluntary action alone has not reduced emissions at the scale or speed necessary to meet the goals of the Paris Agreement. This legislation will make building efficiency and clean energy upgrades mandatory, significantly accelerating the pace of emissions reductions in New York City.

Political will and intensive stakeholder engagement over the course of several years set the conditions for success. Local participants included environmental justice organizations, environmental advocates, affordable housing representatives, the real estate industry, local electric and gas utilities, labor

unions, and City agencies. Critical to achieving a positive outcome was agreement at the outset on specific policy objectives, including quantified greenhouse gas reductions.

Rather than requiring a one-size-fits-all approach, the law provides building owners with flexibility to pursue the best solutions to address their own unique circumstances. This will allow building owners to meet their carbon reduction targets faster and at lower cost.

Buildings that do not comply will face penalties, with annual penalties greater than \$1 million for the worst offenders. Compliance timelines are designed to give buildings enough time to integrate projects into capital planning and align with normal replacement or refinancing cycles. To help compliance, the city’s supportive programs have tripled in size to provide free individual technical assistance to owners of buildings subject to the mandate.

New York City has committed more than \$3 billion to pursue deep energy retrofits in its own buildings.

For private building owners that need to collectively invest at least \$4 billion through 2030, New York City is developing a program for low-cost financing for energy efficiency retrofits through Property Assessed Clean Energy (PACE) legislation. This legislation was also passed as part of the *Climate Mobilization Act*.

The buildings mandate will create more than 26,700 good paying jobs by 2030. Through air quality improvements, the mandate will prevent 50 to 130 premature deaths annually by 2030.

Salt Lake City Mayor Jacqueline Biskupski

100 Percent Renewable Energy

Salt Lake City Council and Mayor Jacqueline Biskupski adopted a joint resolution November 1, 2016, establishing a goal to achieve 100 percent renewable energy for its community electricity supply by 2032. The adopted resolution includes municipal renewable energy goals and a goal to reduce energy-related community carbon emissions 80 percent by 2040.

Salt Lake City led a three-year collaborative process with its investor-owned electric utility and two other local communities. In March 2019 Salt Lake City was successful in advocating for the adoption of the *Community Renewable Energy Act* into Utah State Code. This legislation, the first of its kind in the country, is a model for bringing communities together with an investor-owned utility for achieving ambitious renewable energy goals adopted by the community. This legislation authorizes a filing to the Utah Public Service Commission to create rules, rates and expectations for communities desiring to be served by a net-100 percent renewable electricity portfolio by 2030.

Salt Lake City completed its first community-wide greenhouse gas inventory in 2009. This inventory revealed that more than half of Salt Lake City's carbon footprint is attributed to electricity use. Salt Lake City's holistic strategies for reducing carbon emissions are detailed in the "SLC Climate Positive 2040 Plan." Strategies include: energy efficiency, transitioning to active and electrified transportation, renewable energy installations on city buildings, supporting sustainable and low carbon food production and consumption, and striving for zero waste. Because a large portion of the city's footprint is related to energy, it is clear that in order to make significant and impactful reduction in greenhouse gas emissions, it will be necessary to orient our community's energy use towards renewable resources.

When Salt Lake City first adopted its community-wide clean energy goal, a key barrier to achieving this goal was the regulatory structure at the state level, which largely prevented communities from working directly with their utility to establish a clean energy portfolio in their local areas.

Transitioning electricity use to net-100 percent renewable resources will reduce Salt Lake City's greenhouse gas emissions 50 percent by 2030 (or approximately 2.3 million metric tonnes of CO₂e).

To advance the city's goal of net-100 percent clean electricity, Salt Lake City and Rocky Mountain Power signed a cooperative statement, detailing goals, timing and the scope for this vision. While other cities are moving forward to meet their clean energy goals through arrangements such as independent Power Purchase Agreements and direct control of their own municipal utilities, this type of collaboration with an Investor Owned Utility is the first of its kind in the country.

This collaborative effort was funded entirely with local government funds. In 2016, Salt Lake City, Park City and Summit County jointly provided funding for a feasibility study that provided a tailored analysis for each community to achieve a net-100 percent renewable electricity target by 2032. Salt Lake City continues to fund legal and regulatory expertise and devote significant staff time to develop strategies in collaboration with the investor owned utility and state regulatory bodies.

There is an overwhelming public desire for clean energy options in Utah. The latest 2017 polling by ecoAmerica shows that 71 percent of people living in the SLC area are concerned about climate change and 89 percent believe we have a moral responsibility to create a safe and healthy climate. Similarly, results from 2014 statewide survey, "Your Utah Your Future," concluded that Utahns envision using energy that is "clean, affordable, and reliable."

Small City Honorable Mentions

POPULATION UNDER 100,000

Asheville Mayor Esther Manheimer

Hanover Park Mayor Rodney Craig

Lake Worth Beach Mayor Pam Triolo

Milpitas Mayor Richard Tran

West Springfield Mayor William Reichelt



Asheville Mayor Ester Manheimer

Blue Horizon's Project

The Blue Horizon's Project works to reduce the region's peak electricity demand through energy efficiency and by transitioning the region to a cleaner, affordable and smart energy future. This partnership initiative is supported by the City of Asheville, Buncombe County and Duke Energy Progress and is rooted in community engagement and collaboration. The Blue Horizon's Project works with both residential and commercial entities to take advantage of utility, community, county and city sponsored incentive programs to reduce energy consumption and promote investment in renewable energy.

After Duke Energy announced the closure of the area's coal-fired power plant, it applied to the state utilities commission to replace the facility with three natural gas-fired combined-cycle power plants. Two plants would replace the existing generation capacity; the third was for anticipated peak load growth. In response to this proposal, the community came together to establish the Energy Innovation Task Force (EITF) to find ways to reduce peak demand and delay the construction of a new 190 MW plant. The EITF is chaired by the city, county and Duke Energy and includes representation from a variety of commercial entities, a local university, renewable energy sector, low-income weatherization organizations and a workforce development agency.

Struggling with the challenges of fully defining the problem, the EITF, worked with Rocky Mountain Institute to analyze local electricity consumption data to determine what was driving peak demand. Once the drivers of electricity demand were identified, city, county and community leaders worked with Duke Energy to improve and expand its program offerings to better address these periods of high electricity use. Among the changes, Duke Energy has introduced a pay for performance pilot program for low-income weatherization, installed battery and solar storage in the region, and improved the online customer interface portal.

On April 18, 2019, Duke Energy officially announced the postponement of its planned 190 MW natural gas "peaker" plant, removing it from the list in its Integrated Resource Plan.

This initiative was particularly innovative because it brought together a major investor-owned utility and local governments (both city and county), with the public and broader community, to develop new solutions to address the environmental and economic needs/concerns of all stakeholders. Notably, this important outcome and its many benefits were achieved at a relatively low cost:

- Duke Energy: \$450,000 for Blue Horizons Project website build out, RMI facilitation and program materials.
- City of Asheville: \$410,000, with \$150,000 allocated to direct program funding and \$260,000 directed to reducing city operations peak demand.
- Southeast Sustainable Communities Fund: \$300,000 for low-income weatherization program.
- Buncombe County: \$255,000 for direct program funding.
- Community Foundation of Western North Carolina: \$25,000 for promotional materials.

The Blue Horizon's Project has already resulted in free weatherization upgrades of 150 low-income homes in 2018 and 9 whole-house retrofits of low-income homes. It has also supported reduced energy consumption in 700 other homes as well as 92 businesses. Finally, it has helped enroll another 2,567 residences in a local demand-side management program, along with 895 businesses. Most importantly, it has provided a space for the community to work with both local governments and the electric utility in ways that never existed before.

Link to video on the Blue Horizons Project:

<https://youtube.com/rd7tZEUngA>

<https://bluehorizonsproject.com/>

Hanover Park Mayor Rodney Craig

Solar Installation Permitting

The Village of Hanover Park completed an initiative of Mayor Rodney S. Craig to increase the number of solar installation permits. Solar installations historically were very low within the village. The initiative took quick, bold steps to encourage solar energy growth and remove obstacles to solar development in the community. The initiative sought to revamp the permitting process, evaluate any zoning issues that impede solar installation, streamline and expedite the inspection process, give residents resources to solar installers and increase community engagement by letting them know that Hanover Park was “open for solar business.”

The village’s focus on solar permitting was prompted by an audit of the village’s environmental actions (as part of the Greenest Region Compact 2 or GRC2 Framework) to support the development of a sustainability plan. The audit identified a very low rate of solar permitting in the village, with Mayor Craig in working with the Hanover Park Environmental Committee directing that the issue be addressed immediately.

The most significant challenges were developing a team of individuals who would be responsible for reviewing current processes and establishing a goal for an accelerated permitting system. An aggressive goal would require the ability to liaison across several village departments, including Inspectional Services, Community & Economic Development as well as the Public Information Office. A core group of staff was selected to liaison with the Environmental Committee and individual departments. The village also joined SolSmart, a national designation program which recognizes cities for their solar accomplishments and provides a knowledge base to help individual communities meet their solar goals.

As a result of the initiative, 55 solar installation permits were issued and are expected to generate 436,192 kilowatt hours annually, savings the equivalent of 308 metric tons of CO₂ per year (e.g., roughly the GHG emissions of an average passenger car driving 754,165 miles and burning 34,708 gallons of gasoline).

From a pure results standpoint, the success of this program is obvious, as the community went from just 4 to 55 solar installation permits (as of May 2019). The program was notably notable in that it took a comprehensive, 360-degree look at current permitting practices, with a particular examination of solar energy. This review looked at all applicable policies, the application process, zoning codes, the actual cost to go solar in the community, and an aggressive campaign to market Hanover Park as a solar friendly community.

The virtue of this initiative was that it was completed with existing funds from the current budget, with no additional funding needed to achieve the goals. There was no cost for joining the SolSmart program, with the village investing only staff time.

The program has leveraged more than \$780,000 in solar energy investment, helping bring more clean energy and climate protection to Hanover Park. Notably, the new solar development increases the community’s resilience to disruptions in grid-supplied electricity and has helped the community gain recognition in the State of Illinois for its commitment to solar energy development and advocacy.

Lake Worth Beach Mayor Pam Triolo

Renewable Energy: Ocean Current and Solar Energy

The Atlantic Ocean Gulf Stream provides an exciting new opportunity for the City of Lake Worth Beach, Florida to diversify its electric sources and become a leader in Ocean Current Energy (OCE) generation, adding to its considerable solar energy production. Ocean current generation is an area studied by the U. S. Department of Energy and the potential of the Gulf Stream, providing estimates of the energy available assuming efficiencies of 30 percent.

Specifically, DOE determined that off the shores of Lake Worth Beach, up to 45TWh/y could be produced. This capacity could power 4.14 million homes or 35 percent of the entire state of Florida's annual electricity demand. Lake Worth Beach is in the unique situation of owning a municipal electric power system with optimum proximity to the Gulf Stream Current. Helping to support this deployment is research from Florida Atlantic University Southeast National Marine Renewable Energy Center (SNMREC), one of three Ocean Energy Research Centers sanctioned by the U.S. Department of Energy. This collaboration allows for connection between off-shore generation and the on-shore grid, testing in a real-world environment and leading ultimately to commercialization.

While "selling the vision" of a new concept can be difficult, Mayor Pam Triolo has been championing this initiative over several years, as more and more residents are embracing this future energy strategy. The OCE project is a long-term project but each step brings the city closer to the goal of generating power from the Gulf Stream, becoming carbon neutral, and placing new clean energy resources into the Florida power grid. Lake Worth Beach is becoming a nexus for ocean current energy development, attracting ocean turbine manufacturers from around the globe.

Ocean current energy will need an infusion of massive amounts of capital investment to reach full commercial scale. However, the city has funded and secured funding for a number of initial stages for the project, including an economic analysis, preliminary engineering of off-shore site location for the turbines and electric connection cables, and Federal permit application fees, among other activities, to keep advancing the project.

Importantly, the Ocean Current Energy project is uniting the community around a common vision, with a coalescing of interests – the environmentalist, the scientist, the businessman and the construction worker – stepping forward in support of the project and the vision of ocean current energy, which is clean, constant and carbon free.

In its work on developing its solar energy resources, the City of Lake Worth Beach is now utilizing an inactive landfill to install a "solar farm." As one of thirty-four municipalities in the state that owns its own electric power system, the city has developed the 63-acre landfill site, previously something of an environmental scar, into a significant solar energy resource. This, too, helps to diversify the energy portfolio of Lake Worth Beach Electric Utilities and expand the city's commitment to clean energy use.

The major challenge was the reclamation of the old landfill site. The site had to be sealed and then monitored for several years according to Environmental Protection Standards. Engineering studies were necessary to ensure that the cap could support the anticipated load of the solar panels so that the brackets would not breach the cap. Because of the location of the site, an additional power substation was necessary to tie the generated electric into the grid of the city's electric utility.

The city's solar farm is powered by photovoltaic panels, which produce energy in ambient light, in foggy or overcast conditions, and do not require direct sunlight. It is currently producing two megawatts (MW), outputting enough energy to serve 250 homes, with expansion opportunities of up to eight MW. The installed capacity will produce energy for city residents for more than 25 years.

The City of Lake Worth Beach encompasses less than 7 square miles and serves approximately 37,946 residents.

Milpitas Mayor Richard Tran

Citywide Switch to Carbon-Free Electricity

The City of Milpitas has a long-standing commitment to climate action and renewable energy that recently culminated in a community-wide switch to carbon-free electricity. In June 2018, the majority of Milpitas residents and businesses began receiving carbon-free electricity, and all city operations are now powered by electricity that is 100 percent renewable. The launch of this community-scale, carbon-free electricity was enabled by the city's participation in Silicon Valley Clean Energy (SVCE), a 'community choice' energy provider that was formed to serve the communities of Silicon Valley including Milpitas. Nearly 97 percent of Milpitas residents and businesses are now receiving carbon-free electricity. Because SVCE's generation rates are lower than the investor owned utility, these customers are already seeing savings on their electricity bills. In the first four months since the program was launched, participating city residents, cumulatively, have realized more than \$1.2 million in on-bill savings.

In 2012, the city installed approximately 895 kW of solar photovoltaics at three city facilities, including the Sports Center that is visited by more than 87,000 people annually. Each day, these solar installations serve as a visible model for our community.

The city will begin a phased approach to decarbonizing its fleet through the introduction of electric vehicles powered by 100 percent renewable energy, starting in the third quarter of 2019. It is also exploring partnerships with an energy services company to improve the energy efficiency of municipal infrastructure.

In 2013, the City of Milpitas by City Council action adopted its first Climate Action Plan, providing a roadmap for reducing GHG emissions through 2020. The Milpitas City Council continues to renew its climate commitments, making "Environmental Sustainability" a council priority in 2019. In addition, an update to of the CAP is planned for 2020, where additional strategies for long-term GHG emissions reductions and further community decarbonization will be adopted.

There were certainly challenges in moving a community to carbon-free electricity and in introducing a new community energy provider to city residents, including building customer acceptance. The city worked with SVCE to engage the diversity of the community and raise public awareness about the program. This included advertisements in community news publications, outreach and direct mail in multiple languages as well as hosting community events and presentations. The city continues to work with SVCE to provide "Energy Clinics" that help customers understand their utility bills and provides tips on reducing energy usage.

Community electricity use made up close to 25 percent of Milpitas' 2005 baseline GHG emissions. Transitioning almost all of that dirty power to carbon-free electricity has had a significant impact on our community GHG emissions. While the full impact is still being calculated, the city estimates that the first four months resulted in more than 59.3 million pounds of avoided GHG emissions.

The ongoing commitment and continual expansion of our local renewables and carbon-free power sources is what makes this program notable, as all efforts focus on advancing programs and initiatives that decarbonize city operations and the entire community.

The city seeks to implement renewable energy cost-effectively and, where possible, leverage partnerships to do so. SVCE is a ratepayer-funded program, with initial start-up funding provided as loan by the founding jurisdictions. Individual solar projects in the city were funded through power-purchase agreements.

As with the rest of the San Francisco Bay Area region, Milpitas is experiencing considerable affordability challenges. This program has improved the quality of life for city residents by making cleaner and carbon-free electricity more affordable, with many customers already seeing cost savings on their monthly utility bills.

West Springfield Mayor William C. Reichelt

Tri-City Public Carbon Sequestration Program

A first-of-its-kind program in the United States is the Tri-City Public Carbon Sequestration Program. Three Massachusetts Mayors, led by West Springfield Mayor Will Reichelt, joined together to preserve more than 15,000 acres of urban forest. Mayor Reichelt grabbed the baton from his predecessor, West Springfield Mayor Edward Sullivan and ensured this project would come to fruition.

By committing to maintain forest CO₂ stocks above the regional baseline, this program will provide significant climate benefits through carbon sequestration, while at the same time generating revenues to maintain these pristine areas.

The City of West Springfield has strived to find ways to improve the air quality of its region, while protecting important local resources such as the aforementioned forest acreage from harvesting.

With the understanding that trees are the most expandable ecosystem capable of removing carbon dioxide from the atmosphere and storing it as carbon safely, the city sought to find common ground with adjoining jurisdictions to accumulate as many acres as possible.

Finding a path forward to such a massive forest conservancy commitment meant aligning the interests of three mayors and their city councilors and state legislators, along with the public, all of which was challenging and time consuming. Once this hurdle was cleared, there was the challenge of three city solicitors coming together on the many legal issues in an inter-municipal agreement that was beneficial to all.

The City of West Springfield was certain this was the most effective expandable ecosystem for removing CO₂ from the atmosphere and then storing it as carbon safely over the long term, given the vast regional inventory of hardwood and spruce-fir trees, providing both immediate and long term carbon sequestration benefits.

Never before had one local government, let alone multiple (three) jurisdictions, created a program of this scale and significance for this purpose. This program could serve as an example for others and help catalyze similar efforts by local, state and Federal governments as leaders look for cost effective ways to maintain forested areas by generating revenue from another forest product, sequestering carbon. This program reduces the need to harvest traditional timber/forest products and removes CO₂ from the atmosphere. As trees grow and mature, so does their CO₂ removal potential and the revenues that flow from the sale of the carbon credits.

The Massachusetts State Legislature supported this local effort with a \$100,000 earmark for initial start-up expenses, with the remainder of the program's administration funded by revenues from the sale of carbon credits. Over the next 10 years, revenues from the sale of carbon credits, which the three participating communities will share, are estimated at \$2,049,236.

Under this interlocal agreement, these three municipalities, (West Springfield, Holyoke and Westfield, MA) will be preserving our urban forests for future generations, reducing carbon dioxide levels, and improving air quality in Western Massachusetts.

Revenues generated under the program will be directed to a number of activities; including those that enhance passive recreational activities, eliminate illegal dumping, allow continued migration of animals along and through abutting wooded areas, and improve the overall quality of life. Improved quality of life for the areas is a particularly important factor in retaining existing and recruiting new business to the local area.

Finally, this is a story of how local governments and their leaders stepped forward to address climate protection for the betterment of local, regional, national and global health and economies.



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