



Taking Local Action

Mayors and Climate Protection Best Practices

June 2014





**THE UNITED STATES
CONFERENCE OF MAYORS**

Kevin Johnson
Mayor of Sacramento
President

Stephanie C. Rawlings-Blake
Mayor of Baltimore
Vice President

James Brainard
Mayor of Carmel
Co-Chair, Mayors Climate Protection Task Force

Bill Finch
Mayor of Bridgeport
Co-Chair, Mayors Climate Protection Task Force

Tom Cochran
CEO and Executive Director

DO YOUR PART! PLEASE RECYCLE!

Contents

First Place Award Winners

LARGE CITY

Las Vegas, NV Mayor Carolyn Goodman 5

SMALL CITY

Gresham, OR Mayor Shane Bemis 6

Large City Honorable Mentions

Columbus, OH Mayor Michael B. Coleman 8

Milwaukee, WI Mayor Tom Barrett 8

New York, NY Mayor Bill de Blasio 9

Pittsburgh, PA Mayor William Peduto 9

Washington, DC Mayor Vincent C. Gray 10

Small City Honorable Mentions

Camuy, PR Mayor Edwin García Feliciano 12

Napa, CA Mayor Jill Techel 12

North Miami, FL Mayor Philippe Bien-Aime 14

Santa Barbara, CA Mayor Helene Schneider 14

First Place Award Winners

LARGE CITY

Las Vegas, NV Mayor Carolyn Goodman

SMALL CITY

Gresham, OR Mayor Shane Bemis



Las Vegas, NV Mayor Carolyn Goodman

Net Zero Initiative

The City of Las Vegas is challenging itself to become the nation's first net-zero energy, water, and waste municipality. This "net zero initiative" has seen the construction of more than one million square feet of municipal green buildings, including 18 LEED facilities. Additionally, more than 80 percent of the city's 50,000 streetlights have been upgraded with LED bulbs, reducing annual costs by about \$300,000. The city now has more than 5.25 Megawatts of solar photovoltaic at 30 facilities including a 3.3 megawatt system at the city's wastewater treatment facility. These systems reduce city energy consumption by approximately 15 percent, saving the city more than \$1 million dollars per year.

Comingled recycling at all city facilities has raised recycling rates to 55 percent, up from 20 percent five years ago. Finally, the city has reduced its municipal water consumption by 27 percent since 2008 through turf conversions, xeriscaping, and equipment installations throughout city facilities.

The impetus for the net zero initiative came from the U.S. Mayors' Climate Protection Agreement, originally signed by former Mayor Oscar Goodman. At the heart of the initiative are the desires, shared by current Mayor Carolyn Goodman, to reduce the stress on the city from severe drought conditions, take advantage of Las Vegas' solar energy generation potential, and to make the city an attractive place for its residents, visitors, and businesses.

Project funding was the most challenging aspect of developing this program. During a time of budget decline, the city made an investment of \$65 million in sustainability projects by leveraging Recovery Act grants, utility incentives, municipal bonds on top of city funds. Careful cost benefit analyses of project paybacks, showing that the city would save millions of dollars, were needed to secure project funding. The program has the benefit that as savings accrue and are fully reinvested, funding will become easier for future projects.

Gresham, OR Mayor Shane Bemis

City Energy Management Practices

The City of Gresham implemented an energy management program to aggressively reduce its top energy users as the fastest way to reach the City Council's energy reduction goals. The wastewater treatment plant (WWTP), which was once the top electricity consumer, will produce 100 percent of its electricity need from onsite renewable power by the end of this year, making it very unique nationally. Electricity is generated through an on-site co-generator; a fats, oils, and grease (FOG) receiving station, and a solar array. All of the city's 8000+ streetlights, the second highest consumer, are being converted to LED fixtures this year, dramatically reducing electricity use, GHG emissions, and lifecycle costs.

The City of Gresham's primary driver for reducing energy consumption is financial responsibility to its customers. Gresham adopted an internal operations sustainability plan in 2011, which established sustainability goals, including greenhouse gas and energy use reduction targets. Onsite energy production at the wastewater treatment plant saves ratepayers more than \$500,000/year. Without a significant reduction in annual operating expenses, Gresham's streetlight program would have run out of money by 2015.

Paying for the projects presented the biggest challenge. However, Gresham leadership recognized early-on that they had an excellent return on investment and would equate to lower costs long-term. In addition, the city utilized creative contracting methods, such as design/build, which were critical to reigning in costs and bringing in an outside perspective. The solar array was built using a private/public partnership with SunEdison. Our Fats, Oils, and Grease program was born out of an innovative contracting arrangement with private Fats, Oils, and Grease hauling companies to deliver Fats, Oils, and Grease to the wastewater treatment plan, saving them money from shorter hauling distances and providing the city with new revenue and increased power production.

Large City Honorable Mentions

POPULATION OVER 100,000

Columbus, OH Mayor Michael B. Coleman

Milwaukee, WI Mayor Tom Barrett

New York, NY Mayor Bill de Blasio

Pittsburgh, PA Mayor William Peduto

Washington, DC Mayor Vincent C. Gray



Columbus, OH Mayor Michael B. Coleman

Get Green Columbus

Columbus Mayor Michael B. Coleman started “Get Green Columbus” with a five-year sustainability plan. In 2007, he signed the U.S. Mayor’s Climate Protection Agreement, and, leading by example, has reduced municipal greenhouse gas emissions 40 percent. Despite 9 percent population growth, the city has achieved a 5 percent reduction in greenhouse gases, and expects to achieve a 15 percent reduction by 2015. The reductions in greenhouse gases are a result of the following efforts: 1. Measuring and managing energy; 2. Investing in efficiency retrofits and LEED buildings; 3. Purchasing alternative fuel vehicles and infrastructure 4; Instituting residential recycling; and 5. Purchasing renewable energy. The city’s third sustainability plan will create community greenhouse gas reduction targets and strategies, including a benchmarking and disclosure program targeting buildings over 50,000 square feet to measure, track and reduce energy usage 20 percent by the year 2020. To accompany the program, a revolving loan to fund efficiency and renewable energy improvements will be created in partnership with the Columbus and Franklin County Finance Authority. In fall 2014, the city, with voter authority, will develop a community choice aggregation, which will procure green power for households and businesses and create incentives for locally generated renewable power.

Milwaukee, WI Mayor Tom Barrett

ME₃ Program for Small and Medium-Sized Manufacturers

Milwaukee E3 or ME3 is a federal partnership program that joins forces with local communities to connect small and medium-sized manufacturers (SMMs) with technical experts and resources from federal agencies, states, and regions. Mayor Tom Barrett uniquely adapted this model to fit Milwaukee’s manufacturing profile. Milwaukee E3 offers a three-step process for improving the competitiveness and sustainability of SMMs. Led by a consortium of 13 regional, state and local experts, the three-step process includes: (1) a no-cost manufacturing diagnostic on how SMMs used resources and that identified cost drivers and points of inefficiency; (2) SMM and ME3 Team collaboratively identify the best return-on-investment (ROI) project in order to do a “deep dive” assessment leading toward a process or practice improvement; and (3) grants to incentivize implementation of the improvement. ME3 was designed to improve the competitiveness of SMMs, while establishing the City of Milwaukee as a national leader in sustainable manufacturing and climate protection.

New York, NY Mayor Bill de Blasio

NYC Carbon Challenge

The NYC Carbon Challenge is a voluntary program for private and institutional partners to match New York City government's goal to reduce municipal greenhouse emissions by 30 percent in ten years. This is an accelerated goal ahead of the PlaNYC target to reduce citywide emissions 30 percent by the year 2030 (30x30). Under Mayor Bill de Blasio, the city has expanded the Carbon Challenge for Multifamily Buildings, with 14 residential property management firms now signed on to join 17 leading universities, the 11 largest hospital organizations, and 12 global companies in the program. All together, these participants make up more than 140 million square feet of space and account for almost 5 percent of citywide emissions. The Carbon Challenge motivates action among these participants by combining the high-profile commitment with a platform for the exchange of information and tools for participants to track their progress. With the potential to significantly increase investments in energy efficiency in the multifamily residential sector, the Carbon Challenge is a program that could be replicated in other cities to help reduce emissions in one of the most difficult sectors to reach. Energy use in New York City's one million buildings account for 75 percent of citywide greenhouse gas emissions, and residential buildings account for the largest single source of these emissions—making up 37 percent of the citywide total.

Pittsburgh, PA Mayor William Peduto

Western Pennsylvania Energy Consortium (WPEC)

When local agencies throughout Western Pennsylvania began to feel the financial effects brought on through the removal of electricity rate caps, these entities began to educate themselves, leading to a better understanding of the effects the local coal fire plants were having on their constituents. With this increased knowledge and understanding, the City of Pittsburgh took the lead in creating the Western Pennsylvania Energy Consortium (WPEC) in 2008 to successfully bring together and aggregate large electricity accounts. The WPEC began to bulk purchase electricity through a "reverse auction platform" for the City of Pittsburgh, Allegheny County, Pittsburgh Zoo & Aquarium, Pittsburgh Water & Sewer Authority and the Sports & Exhibition Authority. For the first auction, the newly formed group agreed on a 10 percent renewable energy component. The WPEC saw immediate success with the adoption of a two-year contract that provided each group member with budget certainty, while reducing annual costs by nearly 15 percent, all while implementing a green purchasing policy that adhered to the Pittsburgh's Climate Action Plan first established in 2007. Since that first auction the WPEC has conducted 10 more auctions for utility related services. Currently the WPEC is made up of 15 Municipalities, 6 Authorities, 2 Non-Profits and 1 University. Total electricity usage is roughly 200,000,000 kWh per year, with the green power component now equal to 50,000,000 kWh or 25 percent of the whole.

Washington, DC Mayor Vincent C. Gray

“Game Change” Initiative, Green Construction Code and SRC Trading Program

District of Columbia Mayor Vincent Gray has placed a high priority on pursuing a range of innovative energy and climate solutions in order to achieve the ambitious goals in the Sustainable DC Plan, a 20-year plan to make the nation’s capitol healthier, greener, and more livable. His “Game Change” initiative seeks to take aggressive action to dramatically reduce the city government’s carbon footprint. The Department of General Services (DGS) has set a 20 percent energy reduction goal at targeted public buildings by 2015, which aims to save the city \$10 million a year once it’s scaled up. The initiative relies on new data management systems, smart meters, and benchmarking as well as capital and operation upgrades to support achievement of these goals. Its BuildSmartDC platform will also be used to more accessibly publish benchmarking data on hundreds of privately-owned buildings, collected by the District Department of the Environment (DDOE). In March 2014, the District of Columbia adopted landmark Green Construction and Energy Conservation Codes that will fundamentally transform the way buildings are constructed in the District. The new construction code, considered among the greenest in country, is based on the 2012 International Green Construction Code published by the International Code Council (ICC). It applies to all commercial projects of 10,000 square feet or more and all multifamily residential projects in buildings four stories or higher and 10,000 square feet or larger. Finally, it is being recognized for the Stormwater Retention Credit (SRC) Trading Program, which was established in 2013 as part of a larger suite of stormwater management regulations that are designed to accelerate the installation of run-off reducing green infrastructure. The trading program allows large development sites subject to the new requirements to achieve half of their runoff-reduction requirement through the purchase of SRCs that are generated voluntarily on other sites or the payment of an in-lieu fee to support the program’s goals of increasing stormwater retention throughout the District.

Small City Honorable Mentions

POPULATION UNDER 100,000

Camuy, PR Mayor Edwin García Feliciano

Napa, CA Mayor Jill Techel

North Miami, FL Mayor Philippe Bien-Aime

Santa Barbara, CA Mayor Helene Schneider



Camuy, PR Mayor Edwin García Feliciano

Main Street Business Energy Efficiency Program

The Main Street Business Energy Efficiency Program was developed by the municipality to help main street businesses invest in more energy efficient lights, freezers, air conditioning units and other equipment, allowing participants to lower their monthly electrical bills and reduce the carbon emissions that go into the air. Nearly 20 businesses participated in the program, where the more efficient equipment was installed, saving the businesses between 10-50 percent of their monthly energy bills and reducing carbon emissions.

With Camuy working with many initiatives to control carbon emissions, like planting trees, light improvements, using solar energy in some projects, etc., the availability of ARRA funding in 2009 provided an opportunity to assist businesses on main street and respond to indentified energy efficiency needs. The municipality undertook an audit of the use of energy in each business and the status of its equipment. Participation in the program represented 25 percent of the businesses on main street or 4 percent of all in Camuy. Even though the overall program was relatively small, the first of its kind for a municipality or for the state government, it is being considered by the central government as a permanent program.

Napa, CA Mayor Jill Techel

Napa River-Napa Creek Flood Protection Project

The Napa River-Napa Creek Flood Protection Project provides environmental restoration along with flood protection, part of an area which experienced 22 major floods since the 1860s on the Napa River and its tributary creeks. The environmental component of the project has recreated 900 acres of historic wetlands and tidal marshlands, restored the natural floodplain of the Napa River, and revitalized riparian and riverine habitat along six miles of the river and one mile of its main tributary, which are important spawning areas for the endangered Steelhead. By creating more room for the waterways to spread out, the project will also address any rise in sea level that the area may experience over the next few generations. Various estimates indicate that brackish/freshwater wetlands can sequester approximately 3.9 tons CO₂ gas per acre per year. According to i-Tree calculations, approximately 1,000 oaks of 3"-6" dbh can sequester 21.8 CO₂ gas per acre per year. The Flood Project's restoration areas have converted/restored approximately 1,230 acres of former agricultural and industrial/mixed use lands to wetland, woodland, grassland and open water habitat. Of these 1,230 acres of restored land approximately 736 acres are wetlands, 339 acres are woodland/grassland habitat and 155 acres are open water/tidal channels. Approximately 8,500 oaks have been planted in suitable areas within the woodland/grassland habitat areas of the SWOA.

North Miami, FL Mayor Philippe Bien-Aime

Green Housing Rehabilitation

The City of North Miami believe that sustainability and housing affordability represent two correlated concepts that are intimately linked like two sides of the same coin. In essence, the city seeks to use public funding to reduce or subsidize the cost of “sustainable living” and make the sustainable/environmentally conscious lifestyle accessible to lower income families within the city. In 2011, the city adopted its Green Housing Rehabilitation Guidelines, the first in the State of Florida. The intent of the guidelines is to provide funding for the “green” rehab or construction of residential properties for low- to moderate-income families, at or below 80 percent of the area median income of \$43,000. The program reduces the financial barriers that hinder low income families from achieving sustainable and affordable housing; many of which are excluded from the national discussion on climate change and environmental responsibility due to the absence of available funds or knowledge. The guideline requires that one hundred percent (100%) of federal Community Development Block Grant (CDBG) and Home Ownership Opportunities Program (HOME) funds as well as Florida’s State Housing Initiatives Program (SHIP) funds must be used for rehabilitation, redevelopment and construction projects that contribute to the “greening” of the City. Specifically, the guidelines require that all funds spent in these programs be used in a sustainable manner to promote energy efficiency.

Santa Barbara, CA Mayor Helene Schneider

El Estero Wastewater Cogeneration Plant

In design since 2011, the City of Santa Barbara’s cogeneration (cogen) system located at the El Estero Wastewater Treatment Plant system went on line and began producing electricity and waste heat in December 2013. The system converts methane gas, a natural byproduct of the wastewater treatment process, into electricity. The system is paired with a fats, oils and grease receiving station which receives brown grease waste from local area restaurants and cafeterias and injects it into the digesters at the treatment plant, resulting in an increased btu content in the biogas, allowing the cogen system to supply even more energy for the plant to use. A high-efficiency energy system, cogeneration produces both electricity and valuable heat from the one fuel source. It offers significant economic and environmental benefits because it turns otherwise wasted heat into useful energy source. As a result of the greater efficiency, carbon dioxide emissions and operating costs can be considerably reduced. The city’s system is already exceeding our expectations for electricity production. Sized to produce a maximum of 700kW, it regularly produces just over 500kW satisfying 75 percent of the plant’s electrical needs. The waste heat produced is enough to supply all the heat needed by plant operations and is currently used to heat the digesters.



THE UNITED STATES CONFERENCE OF MAYORS

Tom Cochran

Tom Cochran, CEO and Executive Director

1620 Eye Street, NW
Washington, DC 20006
Tel: 202.293.7330
Fax: 202.293.2352
usmayors.org