



Mayors Climate Protection Center

Successful City Initiatives with Energy Efficiency and Conservation Block Grant (EECBG) Funding

A 204-City Survey

February 2014



THE UNITED STATES CONFERENCE OF MAYORS



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The U.S. Conference of Mayors is the official nonpartisan organization of cities with populations of 30,000 or more. There are 1,398 such cities in the country today, each represented in the Conference by its chief elected official, the Mayor.

DO YOUR PART! PLEASE RECYCLE!

Foreword



Tom Cochran
CEO and Executive Director
The United States
Conference of Mayors

It was just about five years ago that The U.S. Conference of Mayors and the nation's mayors persuaded Congressional and Administration leaders to authorize and then fund the Energy Efficiency and Conservation Block Grant (EECBG) Program. In late 2007, Congress authorized a five-year, \$10 billion commitment to cities, counties and states, providing for new federal investment in local energy and climate initiatives as part of the *Energy Independence and Security Act* (P.L. 110-140). About a year later in early 2009, President Barack Obama and Congressional leaders made the EECBG Program a top funding priority in the *American Recovery and Reinvestment Act* (P.L. 111-5).

Appropriating \$2.7 billion in formula grant funds (to be distributed directly to cities, counties, states and tribal governments) and another \$400 million in discretionary grants (to be awarded competitively by the U.S. Department of Energy), a new and expanded federal/local partnership to further locally-directed energy efficiency and renewable energy initiatives was launched. It has been a journey since that time – working to recover from such a deep economic recession and having to respond to significant federal budgetary constraints affecting all domestic activities, including energy.

These survey findings provide just a glimpse of the important changes now underway in our cities, driven by local energy innovations championed by mayors in every part of this great nation. These mayoral “best practices” we so often share at the Conference of Mayors and our work on surveys to compile a broader picture of city-based initiatives only scratch the surface of what has been achieved locally by this significant, although one-time, infusion of EECBG resources directly into cities.

The very positive results reported in this survey challenge the Conference of Mayors and its members to continue to tell the story of why sustained mayoral leadership is so important to the nation's efforts to find cleaner and safer energy solutions for the future. Recent national data also indicate that our many actions, including mayoral energy initiatives, are making a difference. America today produces a larger share of its energy than it has in many decades, an achievement made possible in part by the improving efficiency of local energy use and the deployment of more home-grown renewable energy in our cities. America is getting more economic output from each unit of energy, and carbon emissions are declining faster than experts predicted just a few years ago. And, we see changes every day in our cities, whether it is less energy to light, heat and cool our buildings, new renewable technologies powering our energy needs, or the fewer miles driven or less gas consumed to make our many daily trips.

We have started the journey toward a cleaner energy future where mayors and their cities are key drivers in getting us there faster. We welcome any and all partners to join mayors in this effort, and respectfully request the Federal government to take another look at renewing commitments to city- and local-based energy action, by providing additional EECBG funding and taking other actions to support mayors and other local leaders.



Survey Results

More than two-thirds of all mayors participating in The U.S. Conference of Mayors' 2014 energy efficiency and technologies survey provided information on their city's use of formula grant funding under the Energy Efficiency and Conservation Block Grant (EECBG) Program.

The Conference of Mayors "conceived" the EECBG Program to engage the Federal government in supporting the nation's mayors in accelerating local energy and climate initiatives, especially the more than 1000 mayors who have joined as signatories to the Conference's Mayors Climate Protection Agreement. Of the \$2.7 billion to the program for formula grants, nearly half of these EECBG funds (\$1.3 billion) were allocated directly to cities; the average EECBG formula grant to cities was about \$1 million.

In 2009, as part of the *American Recovery and Reinvestment Act*, this U.S. Department of Energy-administered program distributed \$2.7 billion in formula grants (largely based on population) directly to:

- Cities with a population of 35,000 or more (including some cities below this population threshold depending on the state);
- Counties with a population of 200,000 or more (including some counties below this population threshold depending on the state);
- States to allocate funds to cities and counties not receiving direct formula funding; and
- Tribal governments.

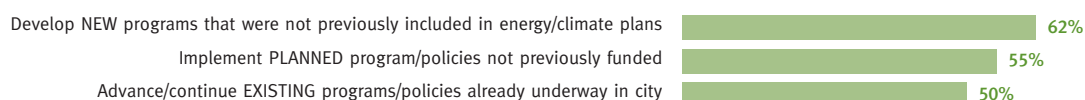
Specifically, 204 of 288 mayors – representing cities of all population sizes and from all regions of the country – responded to a series of questions designed to document how this direct funding helped further city initiatives to reduce energy use through greater energy efficiency and conservation, deploy new energy technologies especially renewable energy systems and curb harmful energy emissions, among other local outcomes.

This report and its findings provide an overview of the EECBG Program, highlighting generally how cities invested their formula grant funds to further their local energy and climate protection efforts.

A sizable majority of mayors used all or some portion of their EECBG funds to develop NEW programs rather than allocating funds to already PLANNED and/or EXISTING city programs and policies. More than six in ten cities (62%) invested EECBG resources in developing new programs that were not previously included in city energy and climate plans, followed by smaller majorities choosing to implement planned programs and policies not previously funded (55%) or advance/continue existing programs and policies already underway in the city (50%).

Use of EECBG Funds for NEW, PLANNED and/or EXISTING Programs

(percentage of cities)



Survey Results

In addition, one in five cities (21% of all respondents) used their EECBG grants exclusively for new programs not previously included in their energy and climate plans. For the half which invested in existing programs and policies, almost six in ten of them (58%) committed some share of their EECBG funds to new programs. Only about one in seven cities (14%) directed all of their funds to existing programs and policies.

This emphasis on new programs is notable because the prevailing view at the time was that many cities would simply substitute EECBG dollars for allocated local funding to existing city energy initiatives.

Most mayors directed a majority of their EECBG funds to investments in municipal projects and operations.

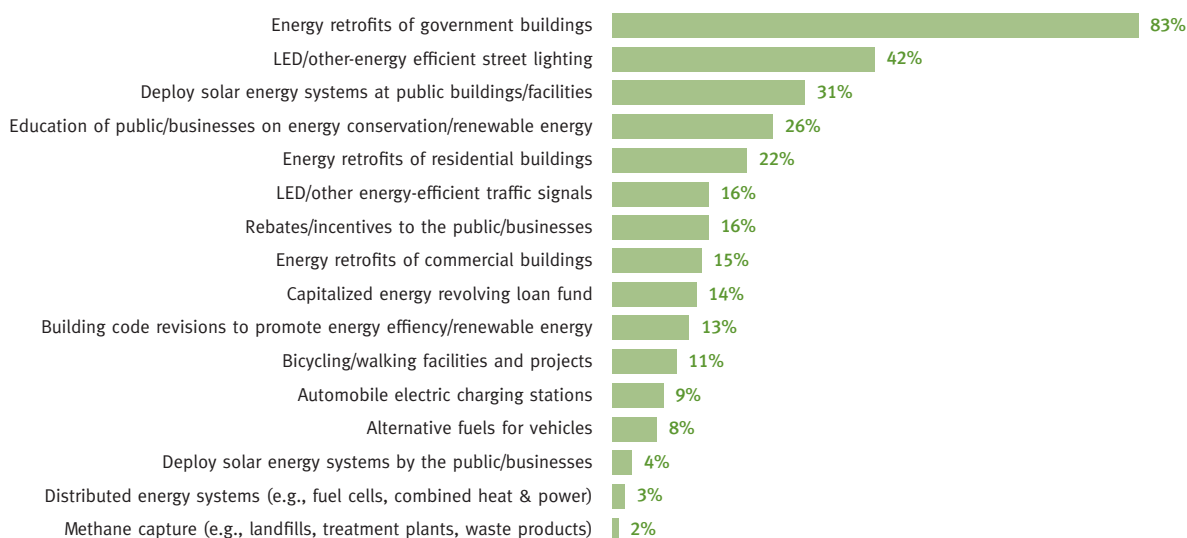
Nearly seven in eight mayors (87%) expended a majority of their EECBG grant dollars on municipal projects and operations, such as improving city-owned buildings, upgrading streetlights, or deploying renewable energy; the remaining 13 percent of cities invested a majority of their funds in non-municipal programs, such as loans, rebates or programs benefiting homeowners and businesses.

When asked how EECBG dollars were invested in their cities, mayors were given 16 project/programmatic choices, categories that largely followed those set forth in the federal law (*Energy Independence and Security Act of 2007*) that authorized the EECBG program. While the category of government building retrofits was the top choice, the chart below illustrates the range of activities that mayors pursued in their efforts to promote greater energy conservation, improve energy efficiency and/or advance renewable energy supplies in their cities. In addition to retrofitting government buildings, more than four in ten cities (42%) invested EECBG dollars in LED/other energy-efficient street lighting, and about one in six cities (16%) invested in LED/other energy-efficient traffic signals. Nearly one-third of the cities (31%) used these flexible funds to deploy solar energy systems at public buildings and public facilities.

While some projects are generally considered municipal in scope, they are often designed to serve residents and businesses directly. Examples of these investments, as shown in the chart below, are electric charging stations for automobiles, bicycling projects, or city education campaigns designed to help inform the public and businesses about energy conservation measures or ways to deploy renewable energy systems.

How Did Cities Use EECBG Funds

(percentage of cities)



In addition to selecting from these pre-set categories, survey respondents could offer written descriptions of local projects/programs funded by EECBG dollars. Cities described a range of activities, from relighting parks and garages with LEDs to some unique energy initiatives.

EECBG funds in one city underwrote a neighborhood-based project, whereby energy technicians targeted underserved neighborhoods and retrofitted homes with energy conservation measures.

With its funds, one city undertook a lighting retrofit of its convention center, including installation of a green roof. Another city developed a program to provide for comprehensive audits for private commercial buildings in the downtown core that were predominately vacant; others used ENERGY STAR's Portfolio Manager to benchmark city-owned buildings and to support benchmarking efforts by commercial building owners. One city used some of its funds to modernize its development practices and rules to make it easier for businesses and homeowners to install renewable energy systems.

Among other renewable energy projects, a city installed a 135 kw windmill at an existing sports complex, and another installed a 100 kw wind turbine on top of a city building. A few cities cited acquired solar-powered garbage/recycling containers, while another installed solar water heaters on its city buildings. A city traffic signal optimization program, with solar-powered street crossing beacons, was also funded with these resources.

One city funded the construction of a central energy plant that now serves a high school, middle school and a civic center. Among several IT projects, conserving energy in one city will be easier now with installation of software that automatically shuts down city PCs at night as well as during weekends and holidays.

Workforce training initiatives also received some EECBG funding, with one city training private sector officials on energy efficiency and building rating. Another city developed a program for trades interns to train them on the installation of energy efficient technologies. One city paid for consulting services to be available to owners of industrial/manufacturing properties, helping them identify ways to cut energy waste and other production inputs.

Although some cities reported challenges in securing federal approvals, one city noted its geothermal project, funded with EECBG resources, which is now producing energy for the city.

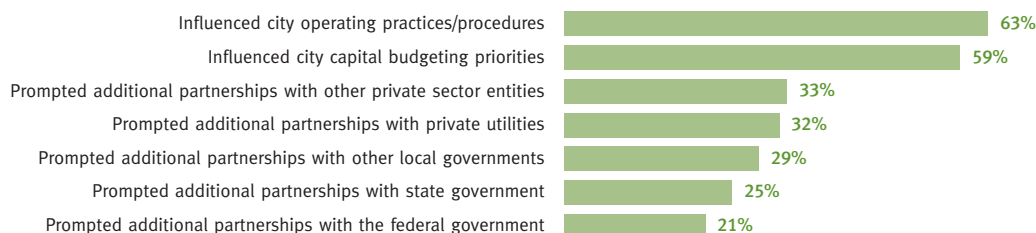
Although not a primary use of these funds, many cities directed resources to updating comprehensive plans and other specialized plans to reduce energy use, promote sustainability and/or advance climate action. Some invested in new city energy management systems, while others undertook greenhouse gas inventories, including developing emission reduction strategies. Finally, some unique projects included a feasibility study to convert grease to fuel and an evaluation of potential energy projects to be funded through a newly-established energy improvement district.

While not an area of inquiry in this survey, a 2010 Conference survey, *Mayoral Survey on Implementation of the Energy Efficiency and Conservation Block Grant (EECBG) Program*, did query cities on the entities delivering EECBG-funded projects, whether they were municipal or non-municipal in nature. Cities reported then that more than three-quarters (77%) of all grant funds would be passed through to private firms.

The availability of EECBG funds to cities has influenced city budgetary priorities, and also prompted new partnerships with a range of private sector and governmental entities. More than six in ten mayors (63%) said EECBG resources influenced city operating practices and procedures, with almost the same share (59%) indicating that this direct federal funding influenced city capital budgeting priorities. About one in three cities said EECBG funds prompted additional partnerships with private utilities (32%), with other private sector entities (33%) and with other local governments (29%).

How EECBG Funds Influenced Budgets and Prompted New Partnerships

(percentage of cities)

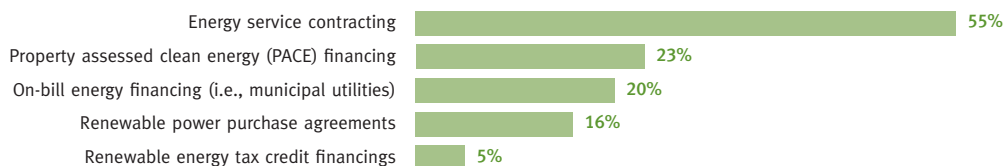


The “leverage” that comes from this relatively modest infusion of federal resources directly into the nation’s larger cities and counties can’t be overstated, considering the enormity of local operating and capital budgets. According to the U.S. Census and its 2011 *State and Local Government Finances* report, all local governments – cities, counties, towns and special districts – expended \$1.3 trillion for current operations, with another \$220 billion in capital outlays, with the direct EECBG formula recipients accounting for a substantial share of these expenditures.

A majority of mayors cited energy service contracting as the innovative energy financing strategy that EECBG funds helped most often. For cities responding to this question, energy service contracting was the top choice (55%) among energy financing strategies that benefited most from the availability of EECBG grant dollars. The next two choices – property assessed clean energy (PACE) financing and on-bill energy financings – were chosen by about one in five cities.

How EECBG Funds Advanced Innovative Energy Financing Strategies

(percentage of cities)



The dominance of energy service contracting among financing strategies is another example of how the conventional wisdom can miss the mark. During the ARRA debate, some private sector firms and their organizations claimed that funding the EECBG Program would discourage cities from utilizing this financing option, commonly called ESCO financing; as the findings of this report show, the availability of EECBG resources had the opposite effect.

Similarly, the Conference's 2010 EECBG survey found that for the more than two-thirds of the respondents (151 of 221 cities) that had not previously used ESCO-type financings, more than half said that EECBG funds had prompted their city to consider or include such financing in their EECBG strategies.

Of the 204 cities participating in this new EECBG survey, slightly more than half (108 cities) provided information on how these funds helped advance innovative energy financing strategies. In addition to the five choices shown above, cities could also provide written information on other locally-initiated financing structures.

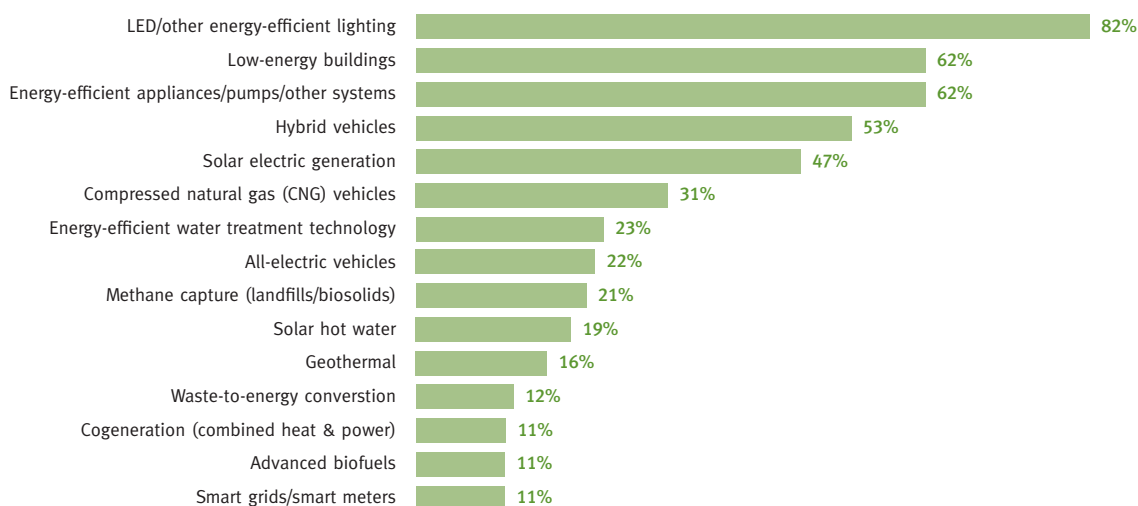
Among these responses, one city noted its loan-loss reserve program in partnership with a local credit union, allowing for no money down, no home equity-based energy loans to homeowners. Another city described its interest-free loans to help residents buy Energy Star appliances, high SEER ACs, and other energy efficient devices, reporting no loan defaults. Another one cited its multiple-city partnership in concert with its Council of Government to facilitate a regional PACE lending program.

LED/other energy-efficient lighting ranked first among energy technologies that have already been deployed by cities, with local and federal resources, most notably EECBG grants, providing the primary sources of funding for these deployments. The first table below shows the energy technologies that cities have already deployed, with more than four in five cities (82%) making LED/other energy-efficient lighting their top choice; the second table below shows the dominance of local funds and federal funds, including EECBG grants, in supporting city deployments of these energy technologies.

After lighting, more than six in ten cities have already deployed low-energy buildings (62%) and energy-efficient appliances, pumps and other systems (62%). More than half of the cities have used hybrid vehicles (53%), and almost half have installed solar technologies to generate electricity (47%). Notably, city use of all-electric vehicles increased to nearly one in four cities (23%), up considerably from the 2011 level of 13 percent.

Technologies Already Deployed by Cities

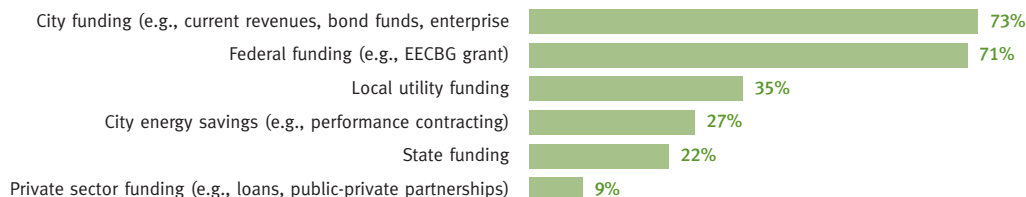
(percentage of cities)



As shown in the chart below, more than seven in ten cities used city funding or federal funding as their top sources for deploying energy technologies. City funding (73%) and federal funding (71%) were used most often, with about one in three cities using local utility funding (35%) and more than one in four utilizing city energy savings (27%) to fund their energy technology deployments.

How Cities Funded Previously-Deployed Energy Technologies

(percentage of cities)



Importantly, it is generally accepted that EECBG funds did help speed the deployment of new energy technologies, especially the use of LED technologies, in cities. The findings of this report and its January 2014 companion report adds further to the anecdotal and other information that the availability of EECBG grants helped accelerate demand for LED lighting. Certainly, such an outcome remains one of the legacies of the EECBG funding commitment to cities, reminding federal policy-makers of the potency of federal investments in city-based energy efficiency and technology initiatives.

The role of the Federal government as a funding partner for cities declined sharply over the last few years. In a January 2014 report by the Conference of Mayors, *Energy Efficiency and Technologies in America's Cities*, mayors ranked utilities (71%) as their top partner in advancing new technologies, followed by state governments (49%), the private sector (41%) and the Federal government (30%). In fact, the Federal government, previously the top choice in the Conference's June 2011 energy survey, *Clean Energy Solutions for America's Cities*, fell to the fourth position among potential partners for cities. This unprecedented decline – 71 percent in 2011 to 30 percent in 2014 – is certain to have been the result of the changed federal/local partnership; the Federal government did not renew its funding commitment to the EECBG Program.

When mayors were asked to give examples of successes with the use of EECBG funds, they often cited “energy firsts” for their cities, energy savings, greater energy efficiencies, and deployment of renewable energy systems, among scores of examples. This discussion provides a sample of successes by mayors in utilizing EECBG resources in their cities.

There were many examples of successes in retrofitting public and private buildings in making the city's building stock more efficient. “Electricity use at City Hall was cut by 47 percent, an outcome helped by the availability of EECBG funds,” one city wrote. “There will be a 20 percent reduction in energy use in the largest government facilities,” said another. Citing other achievements, one city reported that it had retrofitted 1,267 homes and over 130 businesses with its formula grant; another said it weatherized more than 200 income-qualified homes.

Survey Results

Some cities described how broader goals were being achieved. “Funds helped advance a non-controversial ‘quick win’ toward sustainable operations,” said one city. “These funds helped change the mindset about energy reduction,” said another. In touting its investment in renewable energy, one city wrote, “These funds helped establish the credibility of renewable energy as a reliable and affordable alternative.”

Given its prominence in the survey findings, energy gains from more efficient lighting were touted often. A nearly 50 percent reduction in annual electricity costs due to LEDs was reported. Another installed over 2,000 LED streetlights with smart controls, while one said its retrofit of 2,000 city streetlights will save \$50,000 annually.

Successes with other technologies were described, with solar energy systems mentioned often. One city said EECBG funds made its first municipal solar installation possible. Another said it leveraged \$300,000 in EECBG grant funds into a \$2.5 million solar array project. Two cities indicated that 2 or more MW of solar capacity had been installed in their communities. Another city noted its solar-powered hybrid charging station in the heart of its downtown.

Other city transportation projects were traffic light signalization projects, more traditional EV charging stations, and CNG fueling stations. Cities described geothermal installations, smart grid technology, and a wind demonstration program, with one city reporting that it had used its EECBG fund to achieve a total energy savings of 37,654 MMBTU. One city reported that it had leveraged its grant into an \$8.7 million Energy Performance Contract.

The survey findings in this area follow what EECBG Program champions at The Conference of Mayors and among cities have expressed in advocating for this program. Simply, the flexibility of the block grant structure allows cities and other local governments to tailor solutions to their own communities’ needs, which is especially important in the energy and climate arenas.

Finally, cities were asked to provide examples of impediments, federal and otherwise, to the most effective use of EECBG program resources. This information will be provided, upon request, to parties working to make improvements or legislative adjustments to the EECBG program in the future.



Participating Cities

Fairbanks, AK	Pleasanton, CA	Coral Springs, FL
Fort Smith, AR	Redding, CA	Davie, FL
Little Rock, AR	Redondo Beach, CA	Deerfield Beach, FL
Avondale, AZ	Rialto, CA	Hallandale Beach, FL
Mesa, AZ	Sacramento, CA	Jacksonville, FL
Oro Valley, AZ	San Clemente, CA	Lakeland, FL
Phoenix, AZ	San Diego, CA	Largo, FL
Surprise, AZ	San Jose, CA	Lauderhill, FL
Tempe, AZ	San Leandro, CA	Miramar, FL
Tucson, AZ	Santa Ana, CA	North Lauderdale, FL
Alameda, CA	Santa Barbara, CA	North Miami, FL
Alhambra, CA	Santa Monica, CA	Orlando, FL
Anaheim, CA	Santee, CA	Palm Bay, FL
Cathedral City, CA	South San Francisco, CA	Panama City, FL
Chula Vista, CA	Tulare, CA	Pembroke Pines, FL
Costa Mesa, CA	Vallejo, CA	Pompano Beach, FL
Dublin, CA	Ventura, CA	Port St. Lucie, FL
Fontana, CA	Westminster, CA	Tallahassee, FL
Fresno, CA	Woodland, CA	West Palm Beach, FL
Gardena, CA	Aurora, CO	Athens-Clarke County, GA
Hemet, CA	Denver, CO	Atlanta, GA
Huntington Beach, CA	Westminster, CO	Columbus, GA
Irvine, CA	Bridgeport, CT	Savannah, GA
La Habra, CA	Danbury, CT	Maui, HI
Long Beach, CA	Fairfield, CT	Davenport, IA
Los Angeles, CA	Milford, CT	Des Moines, IA
Monrovia, CA	Norwich, CT	Dubuque, IA
Newark, CA	Stamford, CT	Urbandale, IA
Newport Beach, CA	Torrington, CT	Boise, ID
Novato, CA	Waterbury, CT	Idaho Falls, ID
Ontario, CA	Washington, DC	Evanston, IL
Palm Desert, CA	Wilmington, DE	Hanover Park, IL
Palmdale, CA	Boynton Beach, FL	Hoffman Estates, IL
Pasadena, CA	Cape Coral, FL	Normal, IL

Participating Cities

Schaumburg, IL	Lincoln, NE	Charleston, SC
Carmel, IN	Nashua, NH	Summerville, SC
Indianapolis, IN	Brick Township, NJ	Sioux Falls, SD
Noblesville, IN	Elizabeth, NJ	Chattanooga, TN
Richmond, IN	Albuquerque, NM	Hendersonville, TN
Olathe, KS	Clovis, NM	Johnson City, TN
Shawnee, KS	Santa Fe, NM	Knoxville, TN
Lexington, KY	Carson City, NV	Memphis, TN
New Orleans, LA	Henderson, NV	Abilene, TX
Boston, MA	Las Vegas, NV	Corpus Christi, TX
Springfield, MA	North Las Vegas, NV	Dallas, TX
Baltimore, MD	Reno, NV	Denton, TX
Portland, ME	Albany, NY	Garland, TX
Dearborn, MI	Syracuse, NY	Mesquite, TX
Farmington Hills, MI	Cleveland, OH	Pharr, TX
Grand Rapids, MI	Columbus, OH	Plano, TX
Rochester Hills, MI	Cuyahoga Falls, OH	San Antonio, TX
Southfield, MI	Dayton, OH	Lehi City, UT
Troy, MI	Lancaster, OH	Salt Lake City, UT
Westland, MI	Lima, OH	Sandy, UT
Burnsville, MN	Tulsa, OK	South Jordan, UT
Eagan, MN	Beaverton, OR	Alexandria, VA
Minneapolis, MN	Bend, OR	Norfolk, VA
Minnetonka, MN	Gresham, OR	Burlington, VT
Columbia, MO	Hillsboro, OR	Everett, WA
Kansas City, MO	Lake Oswego, OR	Redmond, WA
St. Louis, MO	Portland, OR	Seattle, WA
University City, MO	Tigard, OR	Tacoma, WA
Burlington, NC	Lancaster, PA	Vancouver, WA
Charlotte, NC	Philadelphia, PA	Brookfield, WI
Fayetteville, NC	Pittsburgh, PA	Green Bay, WI
Greenville, NC	York, PA	Madison, WI
Winston-Salem, NC	Caguas, PR	Milwaukee, WI
Grand Forks, ND	Providence, RI	Gillette, WY

About the Survey

This report was prepared by The U.S. Conference of Mayors and was based on data collected in a mayoral survey sponsored by Philips. From November 25, 2013 through January 14, 2014, cities could complete the survey electronically. By email, the Conference contacted nearly 1,400 mayors, most representing cities with a population of 30,000 or more, requesting mayors to complete the survey. Survey responses from 204 cities were received and analyzed for this report. We would like to thank all those who participated in the survey for their efforts and timely responses.



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