



Taking Local Action

Mayors and Climate Protection Best Practices

June 2011





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First Place Award Winners

LARGE CITY

Houston, TX Mayor Annise Parker

SMALL CITY

Evanston, IL Mayor Elizabeth Tisdahl



Houston, TX Mayor Annise Parker

Green Building Initiatives

Houston's Green Building Initiatives feature a multi-year agenda to retrofit all 262 city-owned buildings, including fire stations, police stations, libraries and even performance halls, and a Houston Green Office Challenge (HGOC), including its companion Energy Efficiency Incentive Program (EEIP), that challenges private commercial building owners/managers and tenants to reduce energy use, among other objectives. For city-owned buildings, these improvements are expected to reduce energy use by 30 percent in more than five million square feet of office space. More than 330 private sector partners have already taken up the Green Office Challenge, with the city reimbursing building owners for 20 percent of materials and labor for qualifying improvements.

Municipal Buildings

The City of Houston has launched an innovative project to reduce energy consumption at its 262 city facilities by upgrading inefficient equipment through the installation of measures that reduce energy consumption by 30 percent, water consumption and operating costs. Partnering with two energy service companies, the city has finished installations in more than two million square feet of occupied space, with more than three million square feet of additional space either being rehabilitated or assessed for future improvements. Under the program, the two companies guarantee energy reductions to the city, and the resultant energy cost savings pay for the project costs. The city finds initial funds for the program by issuing reimbursable bonds, which have a 10-15 year repayment period. The bonds are eventually repaid through the realized savings on energy bills.

Houston Green Office Challenge

Through its Houston Green Office Challenge (HGOC), the city uses a voluntary program to challenge private commercial building owners/managers and tenants in the city's business districts to increase their energy conservation, waste reduction, water efficiency, cleaner transportation choices and property management/tenant engagement. The HGOC has already attracted 330 participating organizations, affecting building space totaling more than 60 million square feet. Participants use U.S. EPA's Portfolio Manager to track data on energy and water savings; emission reductions are calculated at the end of each year. Challenge participants committing to reductions in energy use of at least 15 percent, with a stretch goal of 30 percent, are eligible for resources under the city's Energy Efficiency Incentive Program (EEIP). The city will reimburse approved office building owners for 20 percent of their implementation costs (eligible materials and labor), up to a maximum of \$200,000 and minimum program funding of \$20,000 for qualifying improvements to an office building of at least 7,500 square feet. The balance of costs are expected to be recovered by building owners in the form of utility cost savings within a four-year period. The initial \$3 million in seed money for the EEIP was capitalized by directing a portion of the city's Energy Efficiency and Conservation Block Grant (EECBG).

Evanston, IL Mayor Elizabeth Tisdahl

Evanston Climate Action Plan

Beginning with the City Council's unanimous affirmation of the mayor's action to join as a signatory to the Conference's Mayors Climate Protection Agreement, the city went to work on developing its Evanston Climate Action Plan (ECAP). Drawing upon the input of more 130 community members and more than 200 identified strategies to reduce greenhouse gases throughout the city, the mayor and city departments have used the ECAP to achieve a goal of reducing the city's emissions by 13 percent by 2013. Its 2010 greenhouse gas emissions inventory shows a 22 percent reduction in municipal emissions below the 2005 baseline (reduction of an estimated 24,560 Metric Tons of CO₂e).

Since 2008, the City's Office of Sustainability has been working to implement projects and programs to support the ECAP, with the goal of reducing emissions to targeted levels. The ECAP is the city's roadmap for its sustainability efforts, bringing focus, collaboration, and structure to various organizations within the community and municipal government. Evanston, as an entire community, has initiated, completed or is in progress implementing more than 110 of the 200 strategies directing activities at the municipal level as well as communitywide.

One area of significant effort and improvement is the Municipal Operations Efficiency Program, drawing upon staff involvement from several departments including Public Works, Utilities, and Facilities Management. Since implementing the ECAP, all city departments including those just noted have gone above and beyond to reduce energy use, improve efficiency and take advantage of state and federal grants. To date, several lighting projects, HVAC upgrades, fleet efficiency and right-sizing and operational changes have resulted in a 22 percent reduction in municipal greenhouse gas emissions below the 2005 baseline.

While the ECAP identifies strategies to reduce greenhouse gas emission, the baseline greenhouse gas emissions inventory quantifies emissions being generated and shows the main categories to be targeted for reductions. With these tools, city staff look for low-cost and high return on investment projects that can reduce emissions and also help save the city money.

The biggest challenge before the city in more recent months is the economic climate, which affects municipal operations and budgets, including associated cuts and reductions. Outside funding has been important, with program financing came from the Energy Efficiency and Conservation Block Grant program (\$749,000 grant, with \$400,000 directed to municipal energy efficiency and conservation projects), the Illinois Environmental Protection Agency and the Illinois Department of Commerce and Economic Opportunity (DCEO grants provided incentives for lighting retrofit projects and added leverage of EECEBG funds).

Large City Honorable Mentions

POPULATION OVER 100,000

Fresno, CA Mayor Ashley Swearengin

New Haven, CT Mayor John DeStefano, Jr.

Orlando, FL Mayor Buddy Dyer

Philadelphia, PA Mayor Michael A. Nutter

San Juan, PR Mayor Jorge Santini



Fresno, CA Mayor Ashley Swearengin

Fresno Regional Residential Retrofit Program

The Fresno Regional Residential Retrofit Program is a robust residential energy audit and retrofit program responsible for the successful large-scale deployment of residential energy efficiency retrofits in the Fresno and Kern county region. The program offers no-cost audits for homes, provides training and support to develop a workforce for whole-house retrofits, and builds and engages a local infrastructure for building performance contractors and home energy raters to provide energy audits/ratings and quality assurance of retrofits. The City of Fresno works independently as well as with multiple and reputable Home Energy Rating System (HERS) contractors to ensure that the information being provided is accurate and consistent. The city also provides reduced-cost, Building Performance Institute (BPI) certification training for local contractors in Fresno and Kern counties. Once certified, these contractors are listed on the California Energy Commission Energy Upgrade California (EUC) website and use of BPI certified contractors are required for homeowners to get rebates through EUC.

New Haven, CT Mayor DeStefano Jr.

New Haven School Construction Program

The New Haven School Construction Program is a 20 year, \$1.5 billion reconstruction of all 44 New Haven public school buildings into modern, efficient learning centers. Initiated in 1995, the School Construction Program has evolved into a national model for its massive scope, innovative financing, emphasis on energy efficiency and high degree of community involvement. Early in the program development, the city developed its own high performance school standards to reduce the environmental footprint of the new schools and control on-going operating costs. From 1998 to September 2009, the 38 school construction projects completed or in construction have totaled \$1.375 billion in building investment by state and city taxpayers. Six more projects, all renovations of existing buildings, are slated for construction in future years to complete the School Construction Program. Nearly four million square feet of school buildings will have been impacted by the program by its end.

Orlando, FL Mayor Buddy Dyer

2030 Challenge

The City of Orlando adopted its 2030 Challenge to become “GHG neutral” in its operations. While several other communities have made similar commitments, Orlando has developed an innovative approach to ensure success through its REF, which stands for “Revolving Energy Fund.” This internal finance mechanism helps pay for energy efficiency and renewable energy projects, and the dollar savings cycle back into the REF. The savings returned to the REF equal the payback period plus one year - ensuring that the fund grows in value to finance more expensive projects overtime. After repayment, the energy savings return back to city’s general fund. Over time, the REF will grow in value and the city’s utility bill’s will drop substantially. The structure provides motivation for staff to finance the quickest payback projects first. The REF was seeded with \$1 million in EECBG funds.

Philadelphia, PA Mayor Michael A. Nutter

Greenworks Philadelphia

To become “The greenest city in America” is the ambitious goal that Mayor Michael A. Nutter has set for Philadelphia. Reaching it will be an opportunity to reposition and repurpose Philadelphia as a city of the future. For the first time in decades, changes beyond the city’s borders—primarily rising energy prices, but also climate change, and an emerging green economy—are increasing the value of our urban assets. Philadelphia’s dense and durable stock of housing, infrastructure, and amenities position us to prosper in a carbon-constrained future. To reach the goal of becoming the greenest city in America, *Greenworks Philadelphia*, the city’s comprehensive sustainability plan, sets 15 overarching goals in five areas: energy, environment, equity, economy, and engagement. Each goal includes measurable targets and specific initiatives designed to help Philadelphia reach the targets by 2015.

San Juan, PR Mayor Jorge A. Santini

“Casa Verde” (Green House) Program

San Juan’s Department of Housing and Community Development conducted research to identify and implement green, sustainable construction methods for developing tropical affordable housing after Mayor Jorge A. Santini launched his “Green Platform” in 2005. Findings of this process integrated green technology to ensure safe, decent and sanitary housing for very-low and low-income families, and sought to mitigate environmental impacts and ensure carbon emission reduction. Units are fire, hurricane and earthquake resistant, yield cooler indoor temperatures, easily constructed, and remain within ‘affordability’ parameters. The “Casa Verde” (Green House) Program was inaugurated in 2009. With established San Juan policy that all affordable housing developed with city support be sustainable, more than 200 green single and multifamily units are being developed and financed for an investment of more than \$17 million over 2 years. Casa Verde now integrates the groundbreaking “Ecohab” unit, with innovations that include: 1) load-bearing patented green panel walls; 2) solar energy panels and water heaters; 3) net-metering; 4) “Lavadue” (a patented restroom technology which transforms waste into recyclable organic compost); 5) a rainwater recycling system for potable and non-potable use; 6) green roofs; 7) Energy Star appliances and “eco-bulbs”; 8) organic exterior and interior paint; and 9) a homeowner’s Manual to educate owners on care and maintenance. The sale price of each unit is \$158,000. Ecohab is the standard for the city’s future affordable housing developments and replicable for other jurisdictions. ‘Energy Star Home’ and ‘LEED’ certifications are underway. The project addresses affordable housing design for the tropics.

Small City Honorable Mentions

POPULATION UNDER 100,000

Chapel Hill, NC Mayor Mark Kleinschmidt

Dubuque, IA Mayor Roy D. Buol

Eden Prairie, MN Mayor Nancy Tyra-Lukens

New Bedford, MA Mayor Scott W. Lang

Wilmington, DE Mayor James M. Baker



Chapel Hill, NC Mayor Mark Kleinschmidt

Chapel Hill Wise Homes and Buildings Program

The Chapel Hill Wise Homes and Buildings Program (Worthwhile Investments Save Energy) is available to all owner-occupied, single family detached structures in Chapel Hill Town Limits. Initiated in March 2011, the city is offering subsidies to conduct energy assessments and complete home improvements, with the goal of reducing energy consumption and greenhouse gas emissions, lowering utility bills, and creating a sustainable program that lasts beyond grant funding. Eligible home improvements at the 50 percent subsidy level include: envelope air sealing and insulation improvements, duct repair, and outdoor thermostats for homes with heat pumps. Eligible home improvements at a 25 percent subsidy level include HVAC efficiency upgrades, energy efficient appliances, re-circulating hot water systems, programmable thermostats in gas heated homes, lighting upgrades, solar thermal hot water and solar photovoltaic or geothermal renewable energy systems. Maximum subsidy per home is \$5,000 dollars.

Dubuque, IA Mayor Roy Buol

Sustainable Dubuque

Dubuque's community-wide sustainability effort is seeing remarkable success under the umbrella of the Sustainable Dubuque Initiative. Sustainable Dubuque, defined by a community task force, creates a platform for a community that includes environmental integrity, economic prosperity, and social/cultural vibrancy, further defined by 11 principles that guide policy decisions and investment. Smarter Sustainable Dubuque, a research partnership with IBM builds on this vision by deploying "smart" technology to improve information available to citizens about water, electricity, natural gas, and travel resources. Dubuque 2.0 is a community-led initiative that inspires sustainability by connecting citizens, business, schools and non-profits to Dubuque's sustainability efforts.

Eden Prairie, MN Mayor Nancy Tyra-Lukens

20-40-15 Initiative

Eden Prairie's 20-40-15 Initiative means increasing energy efficiency in city facilities by 20 percent, increasing fuel efficiency in City's vehicle fleet by 40 percent, achieving this by the year 2015. Success is measured against 2005 benchmark data. In 2005, Mayor Nancy Tyra-Lukens signed the "Mayor's Commitment to Action" at the Sundance Summit's Mayors' Gathering on Climate Protection. After signing this "commitment to action," Mayor Tyra-Lukens formed the city's Conservation Commission. Mayor Tyra-Lukens was also inspired to make a significant contribution to conserving the City's resources, and requested the City Manager to initiate an energy-efficiency "program." After consulting staff, the goals for reducing facility and fleet energy usage were established and the 20-40-15 initiative was launched in December 2006.

New Bedford, MA Mayor Scott W. Lang

Community Retrofit Program

Mayor Scott Lang proposed the Community Retrofit Program (CRP) in 2009, with a goal of increasing the energy efficiency of 5000 units of housing and businesses in the City of New Bedford, MA over five years. The initiative was intended to: 1. Create local career paths; 2. Lower energy costs; and 3. Reduce carbon emissions. The CRP established partnerships, including with CBOs, local contractors, and an utility company. Through community organizing and creative marketing, the CRP utilizes the strength of community relationships to drive demand for energy efficiency. All work opportunities generated are completed by local contractors who meet equity and quality standards. Accomplishing this ambitious goal requires a whole-systems approach that benefits the economy and the environment while building a strong community.

Wilmington, DE Mayor James M. Baker

Green City Wilmington

The goal of *Green City Wilmington* is to foster a livable and vibrant city, one that is committed to reducing its impact on global climate change. In August 2008, Mayor Baker issued an Executive Order to reduce Wilmington's greenhouse gas emissions 20 percent by 2020. The Order has spawned numerous sustainability initiatives – an Urban Forestry Initiative, a LEED rated public facility, implementation of energy efficiency measures in public buildings and traffic systems, a significant investment in solar energy supplying city operational units, engagement of local business leaders in an Energy Roundtable to share sustainability ideas, and engagement of the community at large in consciousness raising on greenhouse issues through self-assessment, to name a few. The city's major investments in energy-related projects are being achieved through a Guaranteed Energy Performance Contract with Honeywell. The first portfolio (\$14.5 million) of eleven measures is near 75 percent complete. Measures in the first portfolio include installation of traffic light LEDs (funded partially with an Energy Efficiency Conservation Block Grant), traditional lighting and thermal controls in city facilities, and two solar locations producing over 950 MWh per year of renewable energy. The second portfolio is in development and includes a Thermal Dryer/Renewable Energy Plant for the Wilmington wastewater treatment plant powered by bio- and landfill gas. This system will generate about 4MW, nearly all of the plant's electrical needs.



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