



FOUNDATION

CASE STUDY

2010 AWARDS OF EXCELLENCE
SUSTAINABLE COMMUNITY DEVELOPMENT

CITY AT A GLANCE

Population (2009): 645,169

Area: 89 square miles

Date of Incorporation: 1822

Mayor: Thomas M. Menino

Office of Environmental and Energy Services:

James W. Hunt, III, Chief

SUSTAINABILITY APPROACHES AT A GLANCE

The City of Boston has three primary guiding principles related to sustainability:

Climate Mitigation: Put in place measures to meet GHG emission goals by the target date of 2020.

Economic Opportunities: Recognize the economic benefits of climate action, create and enhance opportunities for business growth.

Community Engagement: Reach out to the community with a powerful message to educate, inspire, and convert awareness into action; create incentives for participation while clearly identifying goals and measures of progress.

KEY PARTNERS

- Primary: Energy Consumers Alliance of New England (dba Mass Energy)
- Action for Boston Community Development
- Next Step Living
- Boston Connects, Inc.
- The Barr Foundation
- National Grid – Natural gas utility for Boston

Boston, MA



The City of Boston is not only one of America's oldest cities, it is also known as one of the most walkable and culturally-diverse in the U.S. Within its boundaries, Boston is largely a developed and dense city with many older buildings. Its mass transit system, the "T", serves both Bostonians and adjacent communities. It has on average 1.1 million riders per day and is known around the world for being an on-time, efficient source of public transportation

Boston leadership and citizenry have both recognized that sustainability planning and implementation is essential for its long-term viability to plan, promote and support a high quality of life. Mayor Thomas M. Menino has lent strong support to integration of sustainability into the City's planning. Boston's approach simultaneously addresses three broad areas of concern: environmental, economic and social. In implementing the plan, the City has two guiding principles; wherever possible actions should contribute to (1) reducing inequalities, and (2) taking care not to worsen existing inequalities.

Structure of the Plan for Sustainable Growth

The City's sustainability planning is focused on primarily climate change issues. Boston's Climate Action Plan was first developed in 2007. The primary goal was a 50% reduction in greenhouse gas emissions by 2050. This plan was updated in 2009 and now includes a new goal of a 25% reduction in greenhouse gases by 2020, a detailed action plan with implementation steps and two new committees:

1. The Climate Action Leadership Committee (CALC)
2. The Community Advisory Committee (CAC)

The Mayor appointed 22 members to the CALC, representing science, business, and neighborhood organizations. The CAC includes representatives from the City's neighborhoods. Nearly 500 people participated in the update process.



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Sustainability Goals and Reporting

After a recent one-year public consensus process, the CALC published a report called Sparking Climate's Revolution:

http://www.cityofboston.gov/Images_Documents/BCA_full_rprt_r5_tcm3-16529.pdf

The document forms a foundation for the City's climate plan, including five primary recommendations:

1. Climate Mitigation: Reduce GHG emissions 25% by 2020.
2. Climate Adaptation: Include projected effects of climate change in all planning for municipal and private projects.
3. Economy: Advance Boston's green economy and jobs goals.
4. Community Engagement: Develop strong partnerships with community organizations.
5. Ensure Resources and Leadership

Example Sustainability Indicator

Buildings

Renew Boston and Utility Energy Efficiency Programs (Electricity and Natural Gas)

Goal: 2020 GHG reduction: 7.9%

Expanded Measure: Strengthen and expand the Renew Boston program to ensure that, with utilities and other partners, it can effectively bring widespread energy efficiency measures to the Boston community, especially harder to reach low-income residents, renters, and small businesses.

Responsibility and Reporting

The CALC and CAC continue to engage with the community and business leaders. Regular updates on progress are provided through a variety of methods including:

Quarterly Reports: The Mayor's Office of Environmental and Energy Services oversees the sustainability efforts. The Mayor's Energy Management Board meets regarding energy improvements for municipal buildings and other energy projects. The Green Team meets regularly to coordinate with City department liaisons on sustainability efforts.

Collaboration with Utilities: A public commission meets twice a year to evaluate Boston's progress in reducing greenhouse gas emissions and the overall goals of the climate action plan.

Boston about Results (BAR): In keeping with Mayor Menino's overall aim of improving performance and responsiveness to the City's residents, data is collected and reported through the Boston About Results (BAR) data management system. (See <http://www.cityofboston.gov/BAR/>)

Annual Report: The City publishes the Boston community greenhouse gas inventory on their web pages.

FACETS OF THE PLAN

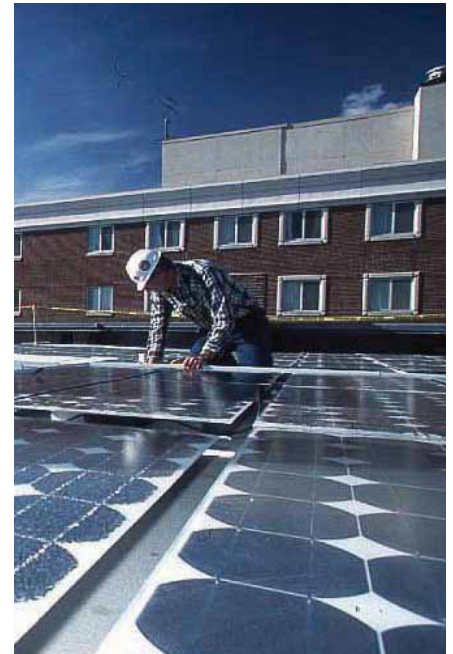
Energy Sources: Solar Boston; Wind zoning; Boston Buying Power with renewable component

Planning: Article 87 Smart growth overlay districts; Complete Streets guidelines; Groundwater Trust and Groundwater Overlay District

Building: Article 37 Green building zoning; Renew Boston; Green affordable housing program

Transportation: Alternative vehicle infrastructure; Bicycle programs; Parking programs

Green Jobs Programs: Green Jobs Boston is a city-wide initiative coordinating a growing list of green job creation, training and placement efforts. Boston's conversion to a sustainable city is stimulating job growth and creating opportunity across all economic sectors.





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Successful Implementation of Plan

Renew Boston Residential Energy Efficiency Pilot Program

The Renew Boston Residential Energy Efficiency Pilot was the first initiative under the Mayor's Renew Boston program. The Pilot signaled to the community at large that the City of Boston was taking the initiative on coordinating energy efficiency in Boston.

An existing utility program was already providing weatherization services to very low income homes, as well as funding 75% of the cost of weatherization for all city residents. The pilot was targeted at the City's greatest need, home owners with incomes between 60 and 120% of area median income.

In the pilot, Mass Energy and Next Step Living provided the services to 175 homes. Each home received approximately \$600 in services (not including labor). At each location of participating Pilot homes, Mass Energy and Next Step did the following work during one three-hour visit:

- Safety check for health concerns
- Deep Audit – a comprehensive audit, using state-of-the-art energy audit equipment (such as infrared cameras and blower door technology) to assess energy usage and pinpoint energy losses
- On-the-spot installations, such as CFLs and water saving devices
- Customer support, management and follow-up

Upon request, contractors could return to perform installation of insulation and air sealing. An additional 15 percent of the homes received a further investment of up to \$2,000 for extended energy efficiency improvements.

Results Achieved

Each participating homeowner in the pilot received energy upgrades that resulted in an average of \$230 of energy savings per year. The homes that received extended services benefited from \$390 in annual energy savings.

The Pilot had several major achievements. It received a 5 out of 5 rating from customer satisfaction surveys. The pilot also gave Mass Energy and Next Step Living valuable experience needed to subsequently win a full implementation contract, funded by American Recovery and Reinvestment Act (ARRA).

More importantly, the pilot helped to better understand how to best use the ARRA funds for expansion of the program. A couple of barriers were identified and analyzed during the pilot:

- Mixed incentives to landlords and tenants.
- Coordination between the City and utility programs
- Safety issues that prevent or delay weatherization efforts.

The program also created 44 green jobs for local residents. This includes in-field installers and customer service staff at local non-profits. A green job training program has also been established by the city.

RENEW BOSTON PILOT AT A GLANCE

Project Type: Carbon reduction, economic development, job creation, reduction of housing costs

Completion Date: 12/31/2009

Project Size: 175 homes

Project Team

Mass Energy
Next Step Living

Costs

Materials Costs:	\$ 17,368
Soft Costs:	
Deep Energy Audits	\$130,907
Heating Tune-ups	\$ 2,175
Other	\$ 5,861
Total Costs	\$156,311

Affordability

Area Median Income:	\$ 88,100
% of AMI (avg.):	60–120%
Number of Units:	175

Cost of Green (per unit)

Total Cost of Greening:	\$ 893
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“My gas bills were cut in half. They showed me where I was losing heat. I was amazed!”

— Saithly Jones, resident, City of Boston

“Another benefit of Renew Boston is the creation of jobs. Wherever we have started our climate work, we have tied our green policy to economic development”

— Mayor Menino

“We are clearly demonstrating in Boston that we can drastically cut greenhouse gas emissions, while at the same time improve the quality of life in our neighborhoods, and save residents and businesses money.”

— Jim Hunt, Boston’s Chief of Environment and Energy

Key Contact

James W. Hunt
Chief, Environmental and Energy Services, City of Boston
(617) 635-3425
<http://www.cityofboston.gov/environmentalandenergy/>

Examples of Sustainability Accomplishments

- Collaboration with the Commonwealth of Massachusetts, including climate committee meetings
- Complete Streets Guidelines: Zoning requirements for Smart Growth have been adopted through the “Complete Street” guidelines.
- Green Buildings policy
- New Transit Stations: Smart Growth and transit-oriented development long a part of Boston Redevelopment Authority.
- Bike Share Program

Challenges and Lessons Learned

There were several important challenges and related lessons learned in the Renew Boston Pilot program. Other cities that may choose to replicate this program must address these challenges. Perhaps the greatest need is to coordinate with local utilities, adjacent communities, and related state programs. This coordination involved information sharing related to overlapping programs as well as leveraging of funds.

More broadly, the City needs to continue to coordinate with local businesses and neighborhood groups to better address their needs. This need to learn and flexibility to respond is critical to meeting the city’s long term sustainability goals.

The City is also recognizing that the climate may change even as efforts to reduce GHG emissions are underway. So, the City is also planning to adapt to foreseeable climate changes. They are assessing the city’s vulnerability to sea level rise, more frequent heat waves, and increased intensity of storms.

