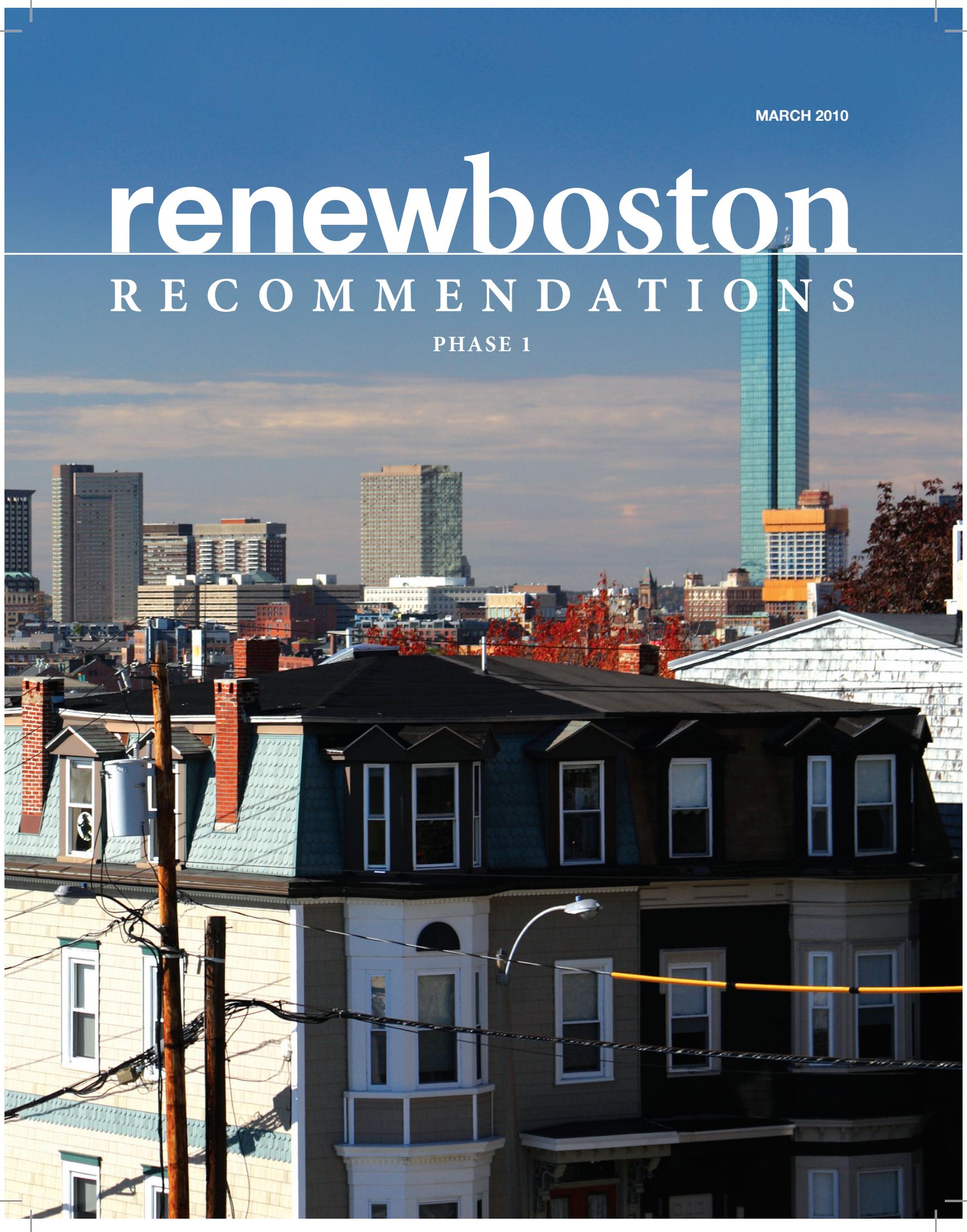


MARCH 2010

renewboston

RECOMMENDATIONS

PHASE 1



renewboston

RECOMMENDATIONS

The City of Boston has an opportunity to be a national leader in green energy while creating green jobs in Boston and helping residents and all energy users to save money on their energy bills. Cities are now widely recognized to be the best places to save energy, and Boston has a unique set of resources — mayoral leadership, state policies, progressive utilities, and supportive institutions and foundations — to apply to this challenge. By leveraging these resources, Boston can achieve dramatic reductions in use of energy from fossil fuels.

Recognizing this opportunity, Mayor Thomas M. Menino has set ambitious city-wide goals for energy savings, green job growth and reduction of greenhouse gas emissions over the next decade.¹ In order to achieve those goals, the city intends to form an entity, to be called Renew Boston, to implement an effective clean energy strategy to help Bostonians save increasing amounts of energy and money. In mid-2009 and with grant funding from the Barr Foundation and The Boston Foundation, the city engaged a consulting team to develop consensus-based recommendations on the formation of Renew Boston. This report sets out those recommendations.

**PRIMARY
RECOMMENDATIONS
ON FORMATION OF
RENEW BOSTON**

1. Establish strong Renew Boston goals to drive participation and commitment.
2. Establish an independent strategy board, community oversight committee and web site to drive innovation and enhance communication.
3. Select initial outreach priorities both to meet the greatest economic needs and to achieve city-wide energy savings goals.
4. Develop 5 Renew Boston functions to leverage unique City of Boston strengths in constituent service, job creation and management information systems.
5. Establish a Renew Boston office to coordinate city departments, neighborhood groups, and utility program administrators.
6. Prioritize 7 implementation steps to accelerate benefits for Bostonians.

**RENEW BOSTON
FORMATION
PROCESS**

The consulting team facilitated weekly meetings of city employees from multiple departments, including specialists working on energy policy, green buildings, green business development, green job creation, building repairs, industrial financing, and management information systems. The consulting team also:

- Coordinated with the concurrent climate action planning process led by the Mayor's Climate Leadership Committee
- Reviewed best practices under development in other cities and proposed new elements for a Renew Boston strategy
- Facilitated relationships and detailed planning sessions with utility administrators of energy efficiency programs
- Obtained and tabulated baseline data on energy use and building characteristics for each of the neighborhoods of the city
- Developed specific goals for participation and energy savings for each year through 2020
- Worked closely with the city and the utilities to develop practical ways to coordinate services and continually improve implementation through social media, data exchanges, and other information technologies, and through a new, independent strategic review process and other innovations.

The result of this process was a powerful strategy with goals against which performance can be tracked, and with a corresponding structure for a Renew Boston office.

RECOMMENDATION 1 Establish Renew Boston goals to drive participation and commitment

The goals were presented to the 3rd meeting of the Advisory Committee and the Mayor on March 3, 2010. The goals include:

- **Residential Participation Goal:** Double the level of residential participation in energy efficiency programs from approximately 3%/year over the last 3 years to 6% over the next 3 years, and then maintain annual participation at the level of 15,000 households/year through 2017, and serve 150,000 households between 2010 and 2020.ⁱⁱ

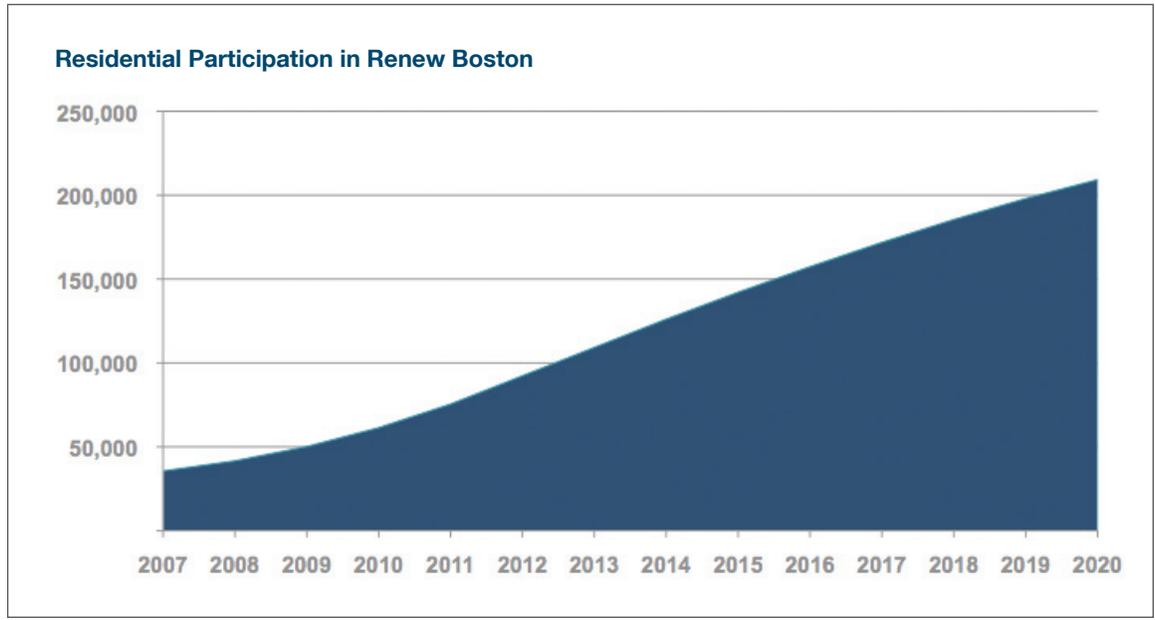


FIGURE 1: The goal is to serve 150,000 households from 2010 through 2020.

- **2012 Savings Goal:** Save 430 million kWh of electricity, which is 6.4% of city-wide consumption, plus 4.5 million therms of natural gas, from 2010 through 2012. Most of these energy savings will need to come from large commercial and institutional energy users, since their usage is so much larger than that of residents, as illustrated in Figure 2.

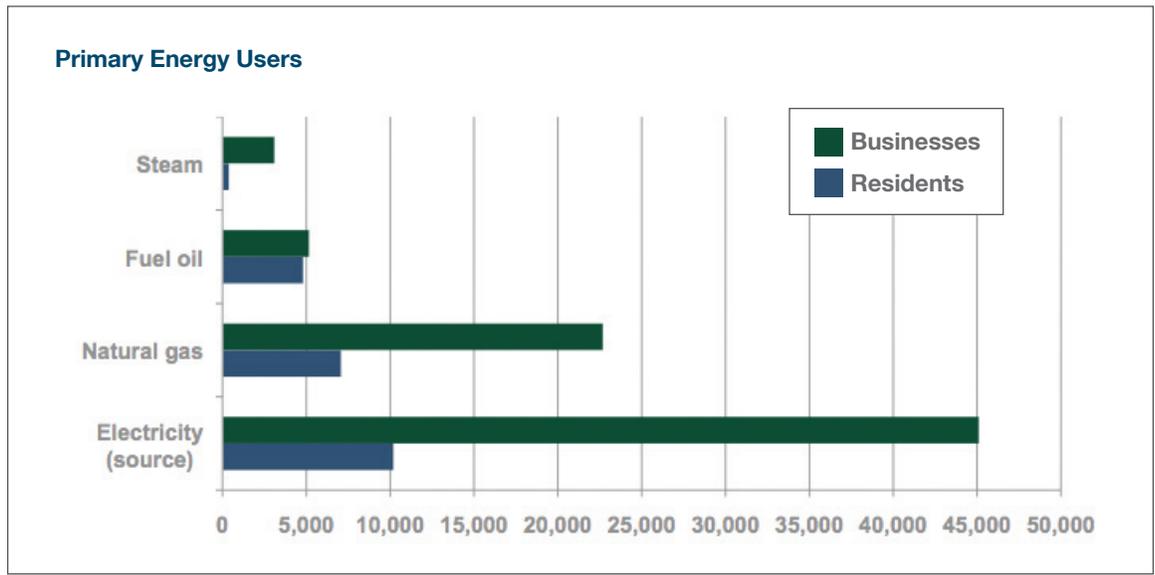


FIGURE 2: Most of the city’s energy is used by commercial and institutional entities.

- **2020 Savings Goal:** Save 2,000 million kWh of electricity by 2020, which is 27% of expected city-wide consumption.ⁱⁱⁱ
- **2020 Consumption Goal:** Reduce actual city-wide consumption of electric energy by 15% from 2008 through 2020, as illustrated in Figure 3.^{iv}

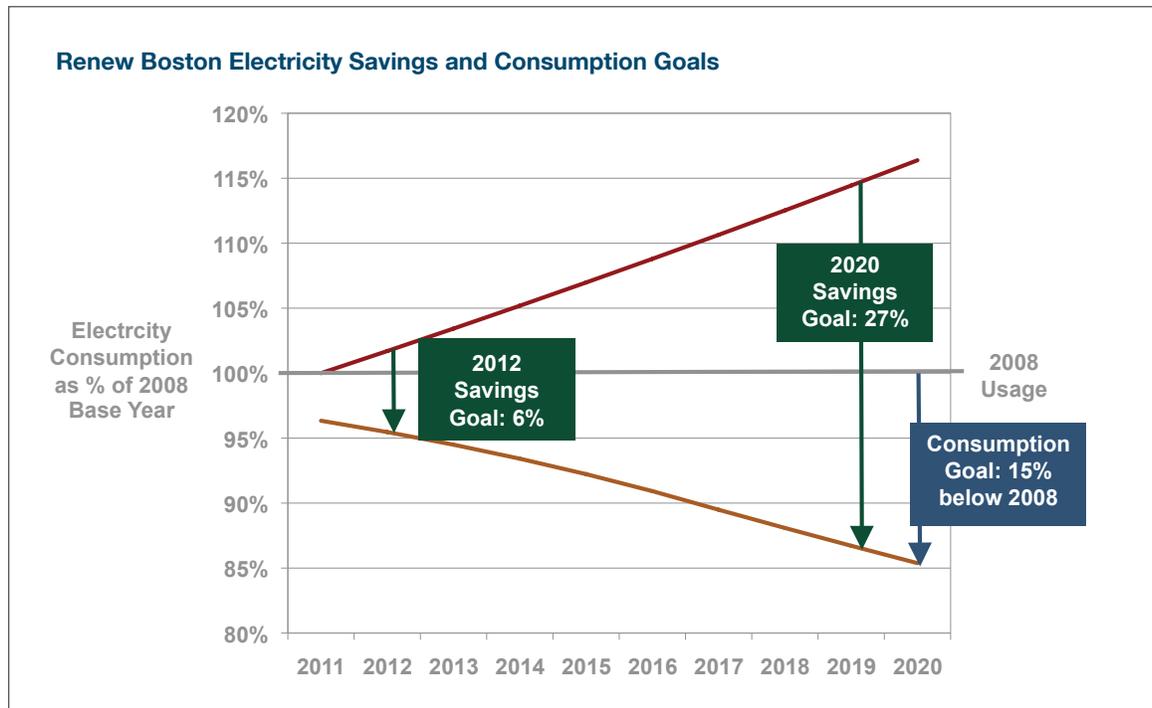


FIGURE 3

This consumption goal allows for an increase in electricity loads of approximately 1.7%/year as population and the economy grow over time, but the 2020 savings goal will be great enough to more than offset those new loads, reverse the historical growth of electricity use, and reduce actual consumption at a rate of 1.3%/year. Each year, Renew Boston should compare actual total electricity consumption with the consumption goal for that year (e.g., 6,250 million kWh and 1,425 MW for 2015), and identify ways to reduce electricity use further as needed to meet the consumption goal in future years.

With this combination of savings and consumption goals, the city of Boston and its partners will be making a unique commitment not only to track the energy-saving impacts of efficiency programs, but also to track the actual reduction in energy consumption. The innovation in this approach is that actual energy use can be benchmarked, and progress toward goals can be followed independently at the level of the neighborhood and even by individual energy users. Everyone who pays an electricity bill can see their actual consumption data already, and new social media can be deployed to help individuals and community groups to understand and follow their energy use and savings. This utility data can be combined in new ways with the city's data on buildings to support innovative outreach to those who could save the most energy and money. In this way, the Renew Boston goals will drive increasing participation and commitment to action at all levels.

RECOMMENDATION 2 **Establish an independent strategy board, community oversight committee, and web site to drive innovation and enhance communication**

To direct the tracking of performance against these goals, and to assure ongoing feedback to the design of program functions, the consulting team recommends the establishment of a high-level strategy board. This board should commission ongoing independent review of the multiple streams of city and utility data and should provide a regular forum to explore the future innovations that will be necessary to continue achieving all the city's goals over time.

The board should also be responsible, with input from the Community Oversight Committee⁴, for the overall direction of the Renew Boston communications strategy and the RenewBoston.org web site. The web site should be branded and presented to the public as separate from the CityofBoston.gov website. This may not require the establishment of a new, separate nonprofit or other organization, as long as the board exercises its independent direction over the branding and messaging of the web site. The web site should not only communicate messages as part of the Renew Boston Outreach campaign, but also provide opportunities for constituents to sign up for efficiency services and for fully up-to-date social media and networking functions. The independence of the web site and the strategy and oversight functions will be critical to Renew Boston's ability to achieve its goals.

RECOMMENDATION 3 **Select initial outreach priorities both to meet the greatest economic needs and to achieve city-wide energy savings goals**

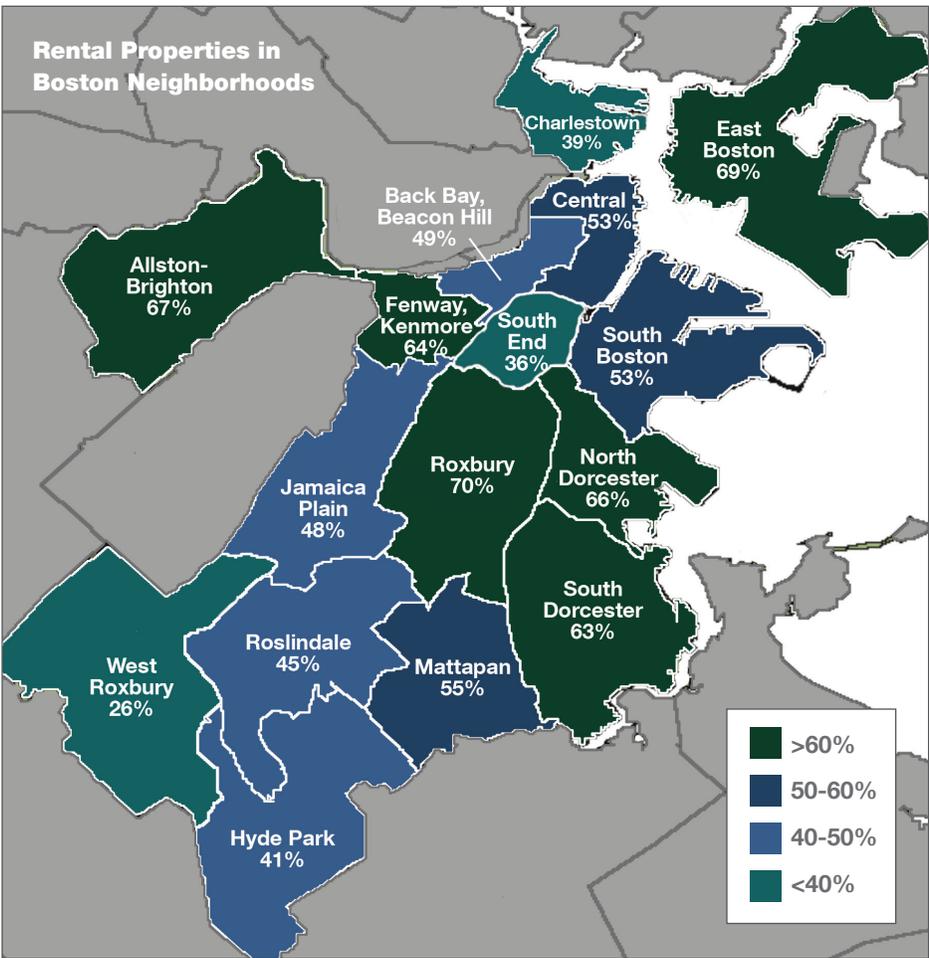
The city has developed Renew Boston to serve all types of buildings all across the city. At the beginning of implementation, it will be necessary to target outreach to those categories of residential constituents with the most pressing need to save money by cutting their energy bills, and also those categories of non-residential buildings with the greatest potential to save large quantities of energy and contribute to achieving the city-wide goals.

The following outreach targets were developed and approved through the first two Renew Boston advisory committee meetings in November and January:

- 1-4 family rental properties with tenants who have incomes between 60% and 120% of the median
- 3-deckers
- Multi-family (>4 unit) buildings and small businesses and nonprofits that are served by the Department of Neighborhood Development
- Property owners/managers with the largest savings opportunities, such as those summarized in Figure 5
- Large hospitals and universities

Other customers would not be turned away, but the limited resources for outreach would be targeted to serve the above categories of customers first. Additional sectors and types of constituents should be added to the outreach campaign over time as resources permit.

FIGURE 4: One of the initial out-reach priorities for Renew Boston is 1-4 family rental properties with moderate-income tenants who have incomes between 60 and 120% of the median. In several Boston neighborhoods, over 60% of the housing units in 1-3 family buildings are rental apartments, while in other neighborhoods fewer than 30% of the units in these small buildings are rented out and most are owner-occupied. Renew Boston will undertake several innovative approaches to contact both landlords and tenants and encourage them to participate fully in energy efficiency programs with the potential to save the most money on energy bills while improving these properties.



Largest Electricity Customers			
		Number of Customers	% of C/I Usage
1	Real Estate	58	14.9%
2	Hospital	28	10.4%
3	University	27	9.6%
4	Government	20	5.8%
5	Financial	11	3.3%
6	Communications	11	2.6%
7	Hotel	13	2.4%
8	Industrial	4	1.8%
9	Boston (incl. BHA)	9	1.6%
10	Sports, Assembly	6	1.1%
		187	53.6%

FIGURE 5: 187 of the largest customers use about half of the C/I electricity.

RECOMMENDATION 4

Develop 5 Renew Boston functions to leverage unique City of Boston strengths in constituent service, job creation, and management information systems

Renew Boston will be a service of the City of Boston and its partners to help Boston residents, businesses, and institutions save energy and money, and to create jobs. The strategy will be to leverage City of Boston strengths and coordinate services in order to mobilize more City constituents to take advantage of energy audits, rebates, and financing to achieve deeper energy savings. Renew Boston will consist of five functions, which can be summarized as follows:

- 1. Outreach and Referral:** Add energy outreach to all of the city's existing constituent and neighborhood services, support outreach by neighborhood volunteers, and support development of an independent web site with innovative social media functionality.
- 2. Intake and Information:** Use city data, MIS systems, and IT expertise to enable intake for energy efficiency programs and to provide follow-up assistance to Bostonians.
- 3. Financing and Assistance:** Obtain grants to leverage utility rebates and develop new ways to pay for "pre-weatherization" repairs, and support large efficiency and CHP projects with low-cost BIDFA bond financing.
- 4. Job Creation and Contractor Support:** Provide multiple forms of support to local Boston contractors and workers to increase green jobs for city residents.
- 5. Tracking and Strategy:** Apply the city's existing and growing MIS and IT capabilities to track and assist constituents' energy saving activities, and create a high-level strategy board to commission ongoing independent review of ways to best achieve stated goals to reduce city-wide building energy use over time.

The consulting team believes that the City can meet its goals and achieve a major ramp-up of energy efficiency and renewable energy by using these five functions to leverage its existing constituent relationships and to develop long-term, performance-based and innovation-oriented program relationships with utility and other implementation partners.

RECOMMENDATION 5

Establish a Renew Boston office to coordinate city departments, neighborhood groups, and utility program administrators

To initiate the Renew Boston functions outlined above, the city should formally establish a Renew Boston office in City Hall. At least one staff member, a Neighborhood Networks Coordinator, should focus on services for residential and small commercial energy users, including interaction with Renew Boston community representatives, who might be called Energy Saving Advocates, and multiple community partners and volunteers. Another staff member should focus on energy saving opportunities with large businesses and institutions in the categories listed in Figure 5. Alternatively, a formal mechanism should be established with both of the utilities to provide for regular high-level interaction to identify large energy users where the city could assist all parties to reach commitments to save substantial amounts of electricity and gas. An organizational structure is diagramed in Figure 6.

The following program marketing and management tasks are among the important responsibilities of the Renew Boston staff, working closely with energy efficiency program administrators and other partners:

- Coordinate planning, budgeting, and delivery of all energy efficiency programs in Boston
- Model and track participation and savings, and refine target market segments
- Coordinate call centers & Boston MIS on protocols and systems
- Assess barriers, define messages, and coordinate city and state campaigns

Modest staffing levels and responsibilities should be sufficient in the central Renew Boston office at least through 2011 because the Renew Boston office will not have to operate most programs, but rather will primarily exercise substantial leverage by coordinating with other employees of the City and the utility energy efficiency programs. The strategy board will be responsible to identify any needs to increase or redeploy staff resources over time.

The Renew Boston staff should also initiate and guide several formal mechanisms for regular interaction with partners and for continued enhancement of strategy, as illustrated in Figure 6 by boxes with dotted lines.

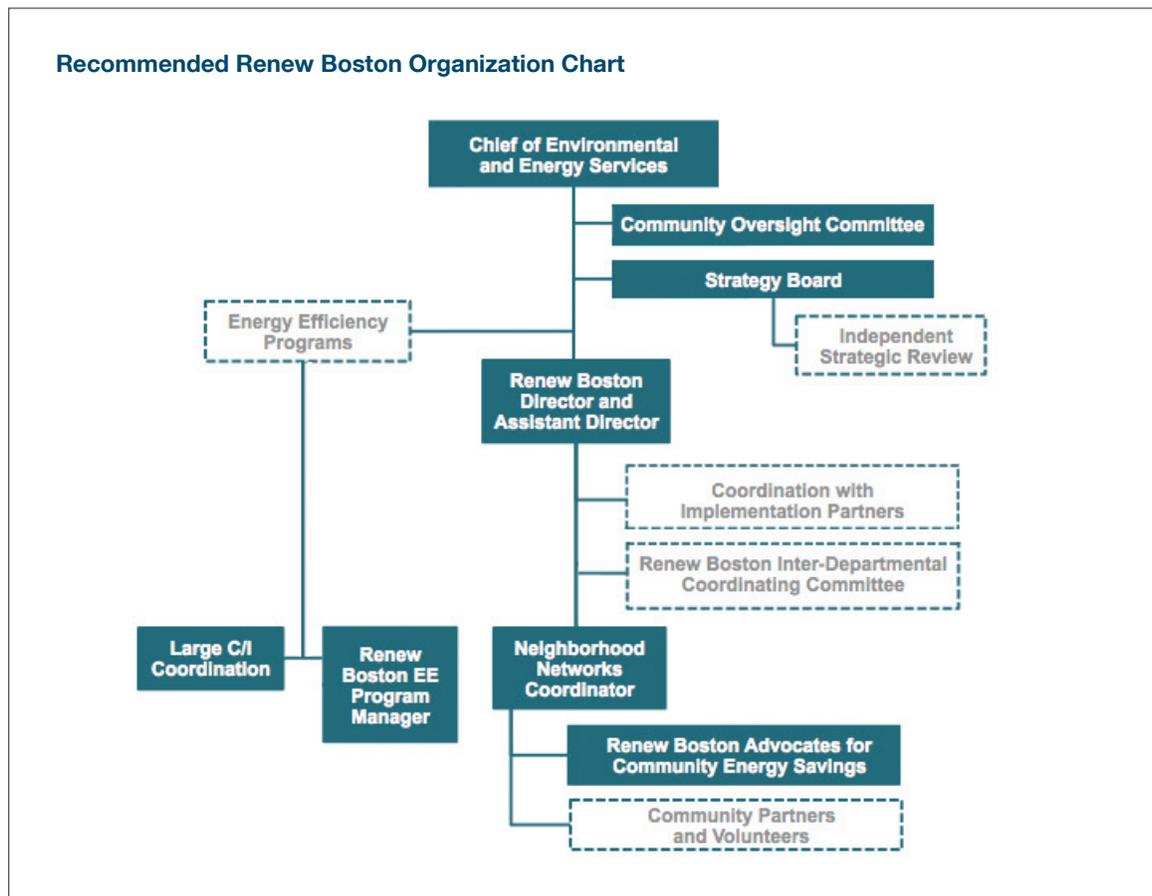


FIGURE 6

RECOMMENDATION

6

Prioritize 7 implementation steps to accelerate benefits for Bostonians

The consulting team has provided the city with a list of key initial action steps to implement Renew Boston, which are summarized in the accompanying text box. To be successful and achieve the recommended goals, the Renew Boston office will require a sustained high-level commitment. Senior leadership will be needed to ensure that all involved cabinets and departments introduce energy benefits to constituents at every appropriate opportunity. In addition, high-level contact will be needed between city officials and executives responsible for some of the buildings with the largest energy use in Boston. Perhaps most importantly, the city will need to place a high priority on participating in the strategy board's regular independent review of progress toward the participation, savings, and consumption goals and the supporting performance metrics. As the strategy board identifies innovations to increase the breadth of participation and depth of savings, the Renew Boston office must be empowered to implement those recommendations with the city's many partners. With this high-level support, the concepts that have been developed through the Renew Boston formation process can now be translated into implementation.

Initial Action Steps

1. Develop specific tracking metrics
2. Develop new IT systems
3. Initiate key utility coordination mechanisms
4. Kick off RenewBoston implementation tasks
5. Establish strategy board and community oversight committee
6. Undertake marketing analyses
7. Initiate call center info, referral, intake process

NOTES

- ⁱ The Mayor's goals include 200 MW of energy savings and demand reduction by 2017, 5 MW of solar power by 2015, and 100 new jobs installing clean energy technologies in Boston. In addition, the Mayor's Climate Leadership Committee is currently considering a recommendation for a 25% GHG reduction by 2020.
- ⁱⁱ The Participation Goal results in the cumulative participation of approximately 85% of Boston households by 2020. This goal will be supported by the adoption of a Boston Residential Energy Conservation Ordinance (RECO) by 2015 that requires certain efficiency measures or standards to be met at the time of resale by all owner-occupied and rental housing and condominiums, and the adoption by 2016 of a Commercial Energy Conservation Ordinance that includes all commercial property over 5,000 square feet, as recommended by the Climate Action Leadership Committee.
- ⁱⁱⁱ To keep up the challenge to Boston energy users over time, the 2020 Savings Goal includes a 5% increase in the amount of electricity to be saved each year for several years. It is an important innovation among city-level planners for Boston to commit explicitly to this type of increase as a separate metric. This results in a level of city-wide energy savings by 2017 that is sufficiently high (savings that are 3.0% of the total electricity use). The goals are based on a total savings level at the 3% level after that year.
- ^{iv} The 2020 Consumption Goal represents a reduction in peak electric load by 230 MW from the 2008 level. In addition to energy efficiency programs, Renew Boston will achieve this goal through increases in demand response, clean distributed renewable energy and combined heat and power (CHP) within the City of Boston. Renew Boston will also include gradual implementation of smart grid technologies and services that enable energy users to both save and generate more energy in their buildings. The development of new electricity demands for electric/hybrid vehicle charging and increasingly efficient heat pumps should be part of the 1.7% annual growth for which the consumption goal provides.
- ^v The proposal for the community oversight committee was originally made in the course of the climate workshops during March 2010, and it is adopted here. It could be formed as a continuation and modification of the existing Renew Boston advisory committee.

A REPORT SUBMITTED TO:

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