



Setti D. Warren
Mayor

2/19/13

ATTACHMENT E
2013 SOLARIZE MASSACHUSETTS: ROUND 1

Team Description:

Newton will implement Massachusetts Clean Energy Center's Solarize Massachusetts program utilizing a team represented by City's Energy Smart Newton initiative, Newton Eco-project, and Newton Citizens Commission on Energy. While this will be a collaborative effort, each entity will assume certain key responsibilities: as a direct extension of the municipality, Energy Smart Newton will oversee the project, provide program administration, and support outreach and implementation activities during the term of the program, Newton Eco-project will provide the bulk of the outreach, and the Energy Commission will develop the monitoring and data processing and serve as the Additional External Review Team Participant.

Energy Smart Newton:

In February of 2012, Mayor Warren joined businesses and residents in proudly announcing the Energy Smart Newton program, a new, innovative initiative aimed at reducing energy usage city-wide by 20% by the year 2020. This comprehensive approach will address the municipal, commercial and residential sectors. As a Green Community as designated by the Commonwealth's Department of Energy Resources, our goal is to reduce energy usage in the municipal sector as quickly as possible, setting the pace and saving over 30,000 Million Metric Btu's (a standard energy measurement which combines electric kWh and gas Therms). NSTAR is a partner in this effort, offering technical advice and financial incentives worth 100's of thousands of dollars to achieve this level of energy reduction.

The municipal representative administering this project will be Maciej Konieczny. Mr. Konieczny is the City's Sustainability Project Manager responsible for reducing energy consumption across municipal buildings as well as point of contact for 'green' questions and challenges. He is also involved with municipal wholesale energy procurement and review of renewable and alternative technologies and their suitability for use in a municipal setting.

Newton Eco-Project:

The Newton Eco-project is an initiative of Green Decade/Newton, a 25 year old citizen organization active in all aspects of environmentalism throughout the city. Since 2008 the Eco-project has provided outreach to the residential sector for energy conservation and efficiency

measures. Over the last five years the Newton Eco-project has been working hard to promote sustainability by helping homeowners improve the efficiency, comfort, and affordability of their homes with improvements that reduce energy consumption and the utility bills. This has been accomplished through various initiatives such as: Eco-teams, the Mass Save Home Energy Program, educational workshops, and public outreach programs. The team that created and maintains a sustained outreach program for home energy assessments and other weatherization actions since 2008 will execute the community outreach program to maximize interest and, ultimately assure that the interest is converted into executed projects.

The citizen volunteer that will serve as the Community Solar Coach will be Jay Walter, R.A. Mr. Walter is a local architect and the Director of the Newton Eco-project. Please refer to the Community Solar Coach Personal Statement attachment for details.

Newton Citizens Commission on Energy:

The Newton Citizens Commission on Energy is a nine-member advisory group established in 1979 by City Ordinance; members are appointed by Newton's Mayor (3), Board of Aldermen (3), and one each from the League of Women Voters, the Chamber of Commerce, and the School Committee. The Commission was created in response to the dramatic spikes in energy prices of the 1970s, with the primary aim of finding cost savings through energy efficiency. The goals and membership in the Commission have evolved in recent years as awareness of the environmental consequences of fossil fuel use grew. This evolution is best exemplified by the Commission's writing of an Energy Action Plan (EAP) for the City in 2004. The introduction states that "the goal of the Energy Action Plan is to reduce energy use and greenhouse gas emissions by 7% below 1998 levels by the year 2010." Since the EAP was distributed the City has realized substantial savings in its municipal sector energy use, and the Energy Commission has been instrumental in achieving many of these gains. It is harder to influence the highly fragmented residential sector, but programs like Solarize Mass will help the Commission incentivize action.

The citizen volunteer and the Chair of the Newton Citizens Commission on Energy will serve as the Additional External Review Team Participant. Dr. Eric Olson, PhD, is on the faculty of Brandeis University, where he teaches courses in the science and economics of climate change and environmental impact assessment, among others. As a community activist, Dr. Olson has helped oversee several interns working in Newton and in Waltham, focused on conducting cross-sectors energy and emissions audits using ICLEI's auditing framework. He has also led solar home tours in Newton in conjunction with NESEA's annual October Green Buildings Open House. He has worked on a number of renewable energy campaigns in recent years, including a "Solar on Schools" incentive offered in 2006-2007 by the Commonwealth's Renewable Energy Trust Fund. In 2012, he joined with other citizen groups and individuals to advocate for a Power Purchase Agreement for 685 kW of solar PV on four Newton public schools; these large solar arrays will be installed this spring and will serve to highlight the potential of solar in Newton.

Summary:

In 2011 The Eco-project and the Energy Commission received a grant from NSTAR's Community Outreach Program to promote the MassSave Home Energy program. Since then, the Eco-project has undertaken an extensive outreach program to promote no cost home energy assessments and weatherization actions that qualified for subsidies and rebates offered by MassSave. In 2012, Newton produced the second most assessments and insulation/air sealing projects out of

NSTAR's programs in Brookline, Cambridge, Dartmouth, Lincoln, Needham, New Bedford, Somerville, Winchester. Last year Newton surpassed its Community Outreach energy reduction goals for KWh by 127% and for Therms by 107%.

In 2012, the City of Newton, through the Energy Smart Newton initiative, reached its five year reduction goal set by Department of Energy Resources Green Community program for municipal buildings. Since its 2008 baseline year, the city has reduced its energy consumption across municipal buildings by 68,036 MMBTu, a 23% reduction. Building on such success, the City continues to work aggressively to reduce its footprint across all sectors. Our commitment to energy conservation and sustainability is clear and we look forward to extending our efforts through Solarize Newton.

Community Description:

The City of Newton is located in Middlesex County, about seven miles west of downtown Boston and thirty one miles east of Worcester. Newton is bordered to the southwest by Needham, to the west by Wellesley and Weston, to the north by Waltham and Watertown, to the east by Brookline and Boston and to the east by Boston. Newton comprises 17.9 square miles of land, most of which is heavily developed. The most recent federal census data from 2010 reported approximately 84,615 persons living in the city. It is considered part of the Boston Metropolitan Area.

Newton was established as a town on December 15, 1691 and incorporated as a city on June 2, 1873. It has a mayoral form of government, a twenty four member Board of Aldermen and eight member school committee elected from within eight city wards. Seventy percent of properties in the city are single family, owner occupied dwellings. Residential use occupies nearly half of the City's land area (49%), while 20% is open space and 6% is commercial/industrial or mixed use.

The city has three schools with solar panels installed on their roofs and will have four additional systems installed by the end of this summer with a combine capacity of approximately 700kW.

Marketing and Outreach Plan:

Outreach:

The Eco-Project will develop a focused outreach program based on its successful outreach for home energy assessments. The strategy will include:

1. Attend scheduled community activities: Attend local events in Newton including city sponsored events, sporting events, and school events where tabling opportunities are will inform the community.
2. Develop educational opportunities: Sponsor the PV 101 and PV 201 workshops included in the program as well as develop a PowerPoint

presentation for small groups that explains solar options and the Solarize Mass program benefits.

3. Leverage existing contacts and relationships: Present to elected officials and community and faith based groups to introduce their memberships to the benefits of photovoltaic systems and the opportunities of the Solarize Newton program. Based on previous work in the community, Newton Eco-project and Energy Smart Newton have existing relationships with the following groups:
 - a. Newton Citizens Commission on Energy
 - b. High Performance Building Coalition
 - c. The Newton PTO Council
 - d. Newton School Committee
 - e. Newton Board of Aldermen
 - f. Historic Newton
 - g. Western YMCA
 - h. Jewish Community Center of Greater Boston
 - i. The League of Women's Voters
 - j. The Newton/Needham Chamber of Commerce
 - k. First Unitarian Society of Newton
 - l. Temple Beth Avodah
 - m. The first Baptist Church of Newton
 - n. First Parish Auburndale
 - o. Crack of Dawn Bicycling Club
 - p. Newton Garden Club
 - q. Various Newton Environmental Organizations (there are 8)

Working through these groups amplifies our outreach by indirectly recruiting committee members to spread the word. Following a presentation to an organization Newton Eco-project will assign a volunteer to follow through with the contacts made at the time to ensure that each resident who shows interest is contacted again with a follow-up communication.

4. Webpage: Develop a host page on the Green Decade website dedicated to Solarize Mass program. The site will also include general information about solar PV technology, financing options, installations in Newton, testimonials and links to other web resources.

Marketing

Newton is experiencing a high level of activity in the marketing efforts with solar PV installers offering an assortment of equipment and financing alternatives. This, coupled with a flood of information about the industry, its effectiveness, and its financial feasibility, especially in residential applications, leaves homeowners confused and conflicted. Often this leads to

inaction. Solarize Newton will aid homeowners gain confidence in the available information and facilitate a well informed decision to (hopefully) move forward with a solar system.

Our marketing strategy will be to brand Solarize Newton as the credible and neutral resource for homeowners interested in installing PV systems at their homes. Offered by a trusted community environmental group and supported by the City, Solarize Newton will become the 'go to' resource for unbiased information and assistance for homeowners who choose to pursue solar system installation. Through our presentations, literature, and website we will help residents navigate the options to select the solar PV system and financing option that is right for them.

We believe the Solarize Newton program will be a particularly attractive option for our residents. Not just because of the potential tiered discount pricing but more importantly, because it offers the opportunity to work with a single installer connected to the program, whose reputation will be easily checked through local groups. There is a certain comfort level associated with this arrangement that addresses what we believe to be a major barrier for homeowners. That is the uncertainty of committing to installers with out-of-state affiliations and relatively few local installations. We will promote the fact that the installer associated with Solarize Mass in Newton has made a strong commitment to working in Newton.

Our marketing effort will be executed concurrently through a variety of venues:

1. Presentations to the community groups listed in the outreach section above
2. Public presentations at both high schools advertised in the public notices in the local newspaper, cable network, and online, in the Newton Patch
3. Marketing material inserts in the residential water bills
4. Appearances on the local cable network, NewTV, shows including 'Sunny Side of the Street' and 'Newton Newsmakers'
5. Lecture at the Newton Public Library in the Green Decade Speaker Series
6. Arrange two 'Solar House Tours' in Newton highlighting successful installations. Market the tours specifically to homeowners who meet the site requirements for their own installations.
7. Lecture at the Newton Historical Society discussing the aesthetic and permitting issues around solar PV installations on historic homes.
8. Regular articles in the Green Decade Newton bi monthly newsletter.

Marketing Budget:

The following is a proposed budget to expand the MassCEC grant. In addition to this funding, Solarize Newton will leverage municipal mailings to distribute information, print shop, and employee time.

Trifold Brochure		
	Graphic Artist	\$ 800
	Printing	\$ 360
	<i>SUB-TOTAL</i>	\$ 1,160
Presentations		
	HS auditorium rental	\$ 160
	City Hall auditorium rental	\$ 80
	Refreshments (15 events)	\$ 225
	Flyers (15 events)	\$ 150
	<i>SUB-TOTAL</i>	\$ 615
Signage for use at tabling		
	Printing	\$ 225
	<i>SUB-TOTAL</i>	\$ 225
Stipend		
	Solar Coach	\$ 500
	<i>SUB-TOTAL</i>	\$ 500
	TOTAL	\$ 2,500

Additional Requirements:

Media Outlets:

Solarize Newton plans on utilizing the following local medial outlets to disseminate information about the program:

1. Newspaper- Newton Tab
2. Television- NewTV (local cable)
3. Internet- Newton Patch

In addition, Solarize Newton will utilize other outlets including:

1. Mayor’s regular news conference
2. Mayor’s Office regular news column in the Tab
3. Green Decade Newsletter

Community Permitting & Requirements:

Newton is a Green Communit and as such has significantly streamlined the application process to design and install renewable or alternative energy projects. Newton follows the 8th edition of the MA Building Code (780 CMR) and IBC 2009 , as applicable, and has adopted the Stretch Energy Code. Newton also follows the 527 CMR and 2011 National Electric Code as applicable. When all required documents are present, the City can issue a permit same day as the application is files. The following is a summary of our community’s permitting requirements:

Permitting Component	Requirements	Review Timeline	Cost	Associated Web Links
Building Permit (roof mounted)	Structural affidavit	Over the counter	\$18.60 per \$1000	http://www.newtonma.gov/civicax/filebank/documents/44008
Building Permit (ground mounted)	Zoning setbacks	Over the Counter	\$18.60 per \$1000	http://www.newtonma.gov/civicax/filebank/documents/44008
Electrical Permit	Licensed Electrician	Over the Counter	\$30-\$70	http://www.newtonma.gov/civicax/filebank/documents/28566
Conservation Commission	Please Read Note 1 Below	0 - 45 days	None or see MA DEP (~\$110)	http://www.newtonma.gov/gov/planning/conserv/policies.asp http://www.mass.gov/dep/water/approvals/wwforms.htm#appendix
Historical Commission*	Please Read Note 2 Below	45 Days Max	N/A	http://assessing.newtonma.gov/gisapps/browser.html http://www.newtonma.gov/gov/planning/histpres/historical.asp
Community by-laws for yard signs	48 post construction	0	\$10.20 per \$100	http://www.newtonma.gov/civicax/filebank/documents/28565
Community by-laws for banners, signs, etc. in public spaces	Special Permit Through Planning Department	5 days	N/A	http://www.newtonma.gov/civicax/filebank/documents/44026

Note 1: For roof mounted systems, the only requirement, and only for properties in a flood zone or wetland buffer, is a free permit to store a dumpster overnight. For ground mounted systems the process is a little more extensive and may involve filing with Mass DEP, again only if it is in a flood zone or a wetland buffer; otherwise ground mounted systems fall under zoning setback regulations. The information whether a property is located in those areas can be found on Newton's GIS webpage. In cases where a ground mounted system is planned within a flood plane of a wetland buffer zone, the City will require that the installer follow MA DEP guidelines, this is only for ground mounted systems. The timeline for completing the process to install a ground mounted solar system within these areas will take approximately 45 days.

Note 2: Any property with a special preservation designation like a local historic district, preservation restriction or City Landmark has design review required for alterations like windows, doors, and roofing. Those properties in Newton total about 830 out approximately 32,000. Other than that, a review is through the demolition delay ordinance which would mean that either demolition or a substantial alteration would need to be proposed in order to require review (ie: 50% of the roof structure or 50% of any facade being altered) and for any building 50 years old or older. A solar installation would not generally qualify for demolition review unless there was a substantial roof alteration necessary. There is no cost to review projects and review is usually completed within 45 days unless the applicant asks for a continuance.

Properties with special protection are listed in our GIS and flagged stating such under Historic Status. National Register listing means the property is significant, but by itself doesn't require design review.

Additional Financial Assistance:

The City will match the Solarize Massachusetts grant through in kind services such as:

1. Printing materials
2. Providing a means to distribute information through its regularly scheduled mailings
3. Employee time
4. Waiving room rental fees
5. Streamlining processes to permit any solar project

Local Interest:

In collaboration with the Green Decade organization, the Solarize Team conducted a survey in mid-February, describing the benefits of the Solarize program and assessing interest in participation should Newton be accepted into the program. Small (free) announcements encouraging participation in the survey appeared over two consecutive weeks in Newton's community newspaper, the TAB. Responses are still coming in at the time of writing, and as of 19 Feb., 57 responses had been received. In answer to the question about interest in participating in the Solarize program, the response has been overwhelmingly favorable: 90% say they are either "significantly more likely" (52%) or "somewhat more likely" (38%) to request a solar PV assessment for their home through the Solarize program, versus an intention to call a solar installation company regardless (0%). It is clear that there is latent interest in solar in Newton, but people report not knowing how to begin the process, and feel unprepared to evaluate the legitimacy of solar contractors and the soundness of contracts offered by solar companies. Through the Survey we have already begun the process of gathering names and contact information for residents eager to participate in a program associated with and somewhat overseen by state and municipal government.

Since November 2011, Newton has installed 15 new systems.