

Melrose Energy Commission Annual Report to the City, FY 2009

September 20, 2009

The Melrose Energy Commission (“MEC”) is pleased to provide Mayor Dolan and the City of Melrose with our Annual Report documenting activities during the 2009 fiscal year (ending June 30, 2009). Created in 2005, the MEC is a group of Melrose citizens who are volunteering their time to help the city and its residents save energy and reduce greenhouse gas emissions. The MEC seeks to reduce the City’s energy costs as well as communicate energy efficiency and savings opportunities to residents of Melrose.

Members:

David Shakespeare - Chair
Douglas Dick - Vice Chair
Susan Gitelle Baron - Secretary
Howie Newman – Communications Coordinator
Gregg Aloï
Marybeth Calnan
Jim Disanto
Ellen Katz
Susan Murphy
Jack Welch

Fiscal year 2009 was a very successful year for the MEC, with several long-term projects coming to fruition. Our accomplishments in the last 12 months include:

Memorial Hall HVAC Upgrade – Members of the MEC participated extensively in the design of the new HVAC system for Memorial Hall in order to maximize energy efficiency, performance and comfort within the prescribed project budget. After several iterations, a design that successfully met these criteria was developed. The project was paid for with grants from State and Federal sources. RDK Engineers was retained to do the design/engineering work. T.E. Snowden, Inc. submitted the winning construction bid. The work was started in June 2008 and substantial completion was achieved in November. The project was managed by the Office of Planning and Community Development.

The work consisted of replacement of the oil fired steam boiler with four hi-efficiency hot water gas fired boilers, converting the existing radiators to hot water, installation of a central air handling system, a 70 ton chiller, two roof top units serving the GAR and a computer based temperature control system.

Professional Energy Audits of Municipal Buildings – Members of the MEC successfully obtained and coordinated the performance of detailed professional energy audits of several municipal buildings via participation in National Grid’s building commissioning programs. These audits would normally have cost the City several thousand dollars, but the MEC was able to take advantage of a pilot program to have this service performed at no cost. Audits were completed for Melrose City Hall, Melrose High School, Melrose Public Library, and the Lincoln Elementary School. These audits identified opportunities for significant energy efficiency improvements to these buildings, and their completion will facilitate eligibility for utility funding for the

installation of efficiency upgrades. The recommendations provided by the audits can be used as a basis for determining the justification of upgrading these facilities to make them more energy efficient.

In addition to these audits the MEC also worked with the City to apply for a comprehensive city-wide energy audit program administered by the state's Department of Energy Resources (DOER). As a participant in this program, Melrose will receive free comprehensive energy audits of all municipal buildings and schools in FY10. The audits will also include site assessments for the viability of solar PV installations on municipal buildings.

Significant Additions to Clean Energy Choice Fund for Melrose – The MEC continued to promote enrollment in the state's Clean Energy Choice electricity purchasing program, under which Melrose households contribute monthly payments through their electricity bills to support renewable energy. These contributions have earned Melrose more than \$23,000 in matching state funds that will further promote renewable energy through equipment (such as photovoltaic panels), consumer education and building analyses. It was recently announced that the Clean Energy Choice program (administered by the Massachusetts Technology Collaborative - MTC) will be phased out in the fall of 2009. The MEC will be working with City officials to apply our balance toward the purchase of a 5 kW solar PV system on the Lincoln Elementary School.

Solar Panels at Melrose Middle School and Lincoln School – The 30 kW solar PV panels that were installed on the Melrose Middle School in FY08 were finally commissioned in FY09 and are successfully generating free electricity for the Middle School. As part of the installation there is a TV monitor outside the Middle School cafeteria that provides real-time information to students and teachers on the energy being generated.

The MEC is working with the Office of Planning and Community Development and other City officials to build on the success of the Middle School by installing up to 30 kW of additional solar PV on the Middle School and up to 5 kW of solar PV on the Lincoln School. Funds for these projects would come from a mix of sources including Clean Energy Choice funds, the Commonwealth Solar Initiative, and Federal Stimulus funds.

DEP Grant for Smart Electricity Meters – The MEC received a grant from the Massachusetts Department of Environmental Protection to purchase 20 Kill-A-Watt meters for use by the public and for Melrose schools. The meters for the public are available for loan from the Melrose Public Library. Kill-A-Watt meters enable residents to measure the electricity consumption of appliances and electronic products in order to better understand their energy use and develop strategies to reduce their energy bills. The Energy Commission also developed a list of books and videos on energy efficiency and climate protection available for check-out from the Library. The list is given to all Kill-A-Watt borrowers. The popularity of the program has been evidenced by long waiting lists at the Library.

Energy Education in Melrose Public Schools – Using funds from the Clean Energy Choice matching grant, two Melrose science teachers – Jim DiSanto and Marty Morse - were able to attend the National Energy Education Development (NEED) curriculum training seminar in Las Vegas in July 2008. The teachers reported back to the MEC to explain how they are incorporating the lessons from the training into their existing curricula. There are now four Melrose educators that have received the NEED energy training as a result of financial assistance from the Melrose Clean Energy Choice account.

Melrose Energy Fair – The fourth annual Melrose Energy Fair, held Nov. 8 at Memorial Hall, drew more than 200 area residents, providing a wide array of approaches to energy efficiency by vendors, speakers and films. Organized and managed by the MEC, the annual Melrose Energy Fair is designed to create public awareness about opportunities for energy efficiency, renewable energy, energy audits and financial assistance for low-income families by providing hands-on demonstrations and information for consumers. Exhibitors included local retailers, contractors and utility representatives. Among the several dozen exhibits were displays about the recently installed solar panels at the Melrose Middle School and the new heating and air conditioning system at Memorial Hall. Films describing these projects were shown during the last hour of the fair (and will also air on MMTV). Melrose was also represented by the City's recycling program, Cub Scout Pack 615's energy-efficiency panorama and a display by a local resident who is installing a solar-powered heating system in her home.

Peter Pruyn, personally trained by Al Gore and the staff of The Climate Project, made a 90-minute presentation based on Gore's 2006 award-winning film about global warming, *An Inconvenient Truth*. Paul Eldrenkamp, a member of Governor Patrick's Zero Net Energy Buildings Task Force, gave an interesting, and highly practical, presentation about energy efficiency in older (historical) homes, which obviously had major relevance here in Melrose.

Public Education and Website – For the third consecutive year, the MEC regularly contributed stories to the Melrose Free Press, Melrose Weekly News and Boston Globe about energy-saving opportunities for consumers as well as energy-efficiency projects undertaken by the City. For a partial list of news stories, see <http://cityofmelrose.org/departments/mec.htm#News>.

Along with Mayor Dolan, the MEC co-hosted a weatherization workshop, which was presented by the Massachusetts Municipal Association at Memorial Hall on March 15. In April, the Commission organized and facilitated the Energy Efficiency and Sustainable Living Group, a series of small group meetings that educated Melrose citizens about energy-saving opportunities in their homes. Also during this period, the MEC gave presentations and provided information about energy efficiency at several local venues, including the Victorian Fair and Melrose Public Library.

The MEC has also facilitated free public access to energy-savings documents at City Hall. During this period, the MEC continued to update and add information to its web page, <http://www.cityofmelrose.org/departments/mec.htm>, which includes information about the MEC, its projects, its recent newspaper articles, the Clean Energy Choice program and links to energy-efficiency information.

Sustainable Living Groups - The Melrose Energy Commission sponsored three Sustainable Living Groups. Modeled on the Mass. Climate Action Network's *Low Carbon Diet* program, participants met in small groups four times over a three-month period to learn and take actions to reduce their households' environmental footprints and reduce climate change. The sixteen participating households made substantial lifestyle changes, such as reducing automobile use, composting food waste and/or weatherizing their homes. The combined impact of their actions over the course of a year will prevent the release of 40 tons of carbon dioxide into the environment.

Green Communities Act -- The MEC has been working in concert with Denise Gaffey, Director of Planning and Melrose Planner, to investigate the opportunities for Melrose in becoming a Massachusetts Green Community. These opportunities include sizable block grants and technical assistance in furthering energy efficiency, conservation and greenhouse gas reduction goals. Gaffey and the MEC then began the process of understanding the requirements associated with becoming a Green Community. Members of the MEC

attended several webinars focusing on the 5 key Green Communities requirements (including the "Stretch Code" which, if approved by a community, would increase the energy efficiency requirements for new and renovated buildings in the community). The MEC assisted Denise Gaffey in applying for and receiving a grant for technical consulting assistance to help Melrose move forward in completing its application as a Massachusetts Green Community. The MEC and Planning Department's goal is to have the City approved as a Green Community by fall 2010.

Mt. Hood Turbine – The MEC is working with the Melrose Parks Commission to determine if a wind turbine could power the electrical demands at Mt Hood Municipal Golf Course. The Massachusetts Technology Collaborative has developed a new initiative to promote wind power in Massachusetts and according to their initial criteria it appears that Mt Hood has sufficient wind to make a wind turbine feasible. The MEC and Parks Department have applied for a site assessment and should receive the results by November 2009.

The past 12 months have been a busy and productive time for the MEC; however, much work remains to be done to fulfill the MEC's mission. The coming fiscal year will provide even more challenges to the City and its residents in the form of significant increases in all energy bills – electric, home heating, and transportation. The MEC will redouble its efforts to find ways for the City to save money on its energy bills, and to educate Melrose residents on how they can do the same.

Respectfully submitted,

David D. Shakespeare
Chair