Expanded Policy

LEADING BY EXAMPLE

Policy summary: The Leading by Example (LBE) Program, established in April 2007 by Governor Patrick's Executive Order (EO) No. 484, works to lower costs and reduce environmental impacts at all Executive Branch agencies, as well as the 29 public institutions of higher education and several quasi-public authorities. The program oversees efforts to reduce energy use at the state's 70 million square feet of buildings and fuel use among the thousands of light and heavy duty vehicles, expand recycling programs, reduce water consumption, promote environmentally preferable purchasing, facilitate the construction of high performance state buildings, and reduce carbon emissions across state government. EO 484 sets the following targets for state government: 25 percent reduction from a 2002 baseline in GHG emissions by 2012, 40 percent by 2020, and 80 percent by 2050; 20 percent reduction from a 2004 baseline in energy use intensity by 2012 and 35 percent by 2020; and an increase in consumption of renewable electricity to 15 percent of total electric use by 2012 and 30 percent by 2020. The EO also established a "Massachusetts LEED Plus" building standard for new construction and major renovation projects that requires all state government projects to achieve LEED certification and perform 20 percent better than the Massachusetts energy code.

The LBE Program is overseen by EEA and Administration and Finance, working collaboratively with state agencies such as the DOER (clean energy policies and project implementation), Division of Capital Asset Management (construction and energy projects) and Operational Services Division (procurement) to track state government energy use and GHG emissions, oversee the funding and implementation of dozens of clean energy projects annually, and provide technical assistance and training for dozens of agencies and hundreds of staff each year.

Despite the advances made by the LBE program, there is currently no single entity charged with managing and procuring low-cost, clean energy across all public agencies, authorities, and facilities. The Administration has proposed and will continue to work toward the development of a Common-wealth Energy Solutions program, which will end the separate decision-making by multiple agencies and provide an opportunity for a comprehensive, integrated strategy from procurement (taking advantage of economies of scale) to continuous monitoring and management of energy performance.

Clean energy economy impacts: Leading by Example efforts that include broad and comprehensive energy efficiency projects, as well as small and large-scale renewable project installations, will continue to create significant numbers of clean energy jobs in the construction and retrofit markets. Additionally, these efforts will result in a stabilization and potential reduction of state government energy costs, and will continue to reduce the amount of foreign oil used in public buildings.

Rationale: With approximately 70 million square feet of buildings, state government operations result in significant amounts of fuel consumption annually, including approximately 900 million kWh of electricity, 50 million therms of natural gas, 15 million gallons of fuel oil and more than million gallons of diesel fuel and gasoline. This consumption results in over 800,000 tons of GHG emissions and expenditures exceeding $220 million. Given this large impact, there is clearly a huge opportunity to reduce energy usage and associated carbon emissions. Such efforts will also demonstrate to other institutions and the private sector that large-scale energy reduction and renewable energy efforts are both feasible and fiscally desirable.

Design issues: Although significant clean energy programs are underway at state facilities, efforts to sustain such programs at the current scale once federal stimulus dollars are no longer present are needed. Also, efforts to streamline and simplify bidding and construction timelines have taken place, but more work will most likely be needed to ensure that projects are undertaken and completed in a timely fashion.

GHG impact: GHG emission impacts are directly related to energy reduction and renewable energy efforts at state facilities. If the 2012 targets in EO 484 are met, this would result in a reduction of approximately 200,000 metric tons of GHGs.

Other benefits: Additional benefits include reduced energy costs for Massachusetts taxpayers. The installation of new equipment also minimizes facility maintenance costs and needs, and improves comfort for the thousands of employees, residents, and visitors who work or live in, or visit, state facilities. LBE projects also provide important piloting for new technologies and system management initiatives that could be adopted by other institutions and cities and town, as well as the private sector.

Costs: Although exact costs are unknown, it is anticipated that over $200 million worth of clean energy projects will be implemented by 2012. Project costs will, for the most part, be funded through the Massachusetts Clean Energy Investment Program (CEIP), a newly developed program that is designed to provide low-rate bond financing paid for out of project savings. This program results in a positive cash flow early in the project and overall simple paybacks of between 10 and 20 years. Additional financing through 2012 and thereafter will be targeted through 3rd party financing, forward capacity market payments, Renewable Energy Credits, utility incentives, and, where available, renewable energy rebates.

Equity issues: There are no known equity issues.

Experience in other states: Many other states have undertaken "leading by example" efforts, including California, Colorado, Illinois, Indiana, New York, North California, Pennsylvania, and Utah. Success has varied, but all efforts recognize the impact to the state budget of reducing energy costs, as well as how such efforts are critical to the success of statewide clean energy goals, where applicable.

Legal authority: EO 484 provides the legal authority to those entities overseen by the Governor. Other independent entities, such as the MWRA, MassPort, and the Massachusetts Convention Center Authority, frequently participate on a voluntary basis in the LBE Program and undertake similar efforts, but they are not subject to the specific targets in the order.

Implementation issues: Successful implementation is dependent upon state resources, including financial and staffing. LBE staff will continue to work with key agencies, in particular the Division of Capital Asset Management and Executive Office for Administration and Finance, to ensure that such resources are available.

Uncertainty: Given the success of past efforts, current use of federal ARRA funding, and the ongoing collaboration between key agencies, it is likely that a significant number of clean energy projects will be initiated and completed over the next several years. However, meeting the energy and GHG emission reduction targets will depend on the extent to which energy reductions are sufficient to overcome new construction and expansion of services — particularly at the public institutions of higher education, which have seen a significant increase in enrollment and hours of operation. Additionally, ensuring that adequate funding exists to implement large-scale projects is critical to meeting the targets.