While it hasn't yet reached the glory of Paul Revere's ride, another grass-roots revolution is under way across much of commonwealth. And like the famous ride 228 years ago, this revolution evolves around freedom -- freedom from expensive, polluting energy sources.

From wind turbines in Hull, to solar panels in Somerville to energy-efficient street lights and hybrid vehicles in Medford and Cambridge, Massachusetts communities are on a mission to reduce their overall energy consumption while boosting their reliance on clean, renewable sources of energy.

Spurred by the prospect of large cost savings on energy bills and growing citizen interest in less-polluting energy sources, communities as big as Boston and as small as Arlington are developing formal action plans that document energy spending and where energy reductions and cost savings can be found in building maintenance, street lighting, transportation and trash disposal.

With renewable energy technologies more readily available, communities such as Hull, Newton and Brockton are moving aggressively to supplement traditional energy sources with solar panels, wind turbines and other clean-power sources that are being installed on municipal properties.

These municipal programs are reducing New England's reliance on fossil-fuel power plants, which emit pollutants that cause elevated smog levels, acid rain and mercury deposition. They're also saving cities and towns money at a time when municipal budgets and school budgets are razor tight.

The benefits of these energy efficiency and clean energy programs are already widespread. Among the highlights:

- Newton's $130,000 investment in energy-efficient lighting in 38 municipal buildings is saving the city $60,000 a year on its electricity bills. Eighty percent of the energy efficiency improvements were paid for by a local utility.

- Medford, Arlington, Somerville and Brookline are saving tens of thousands of dollars a year by replacing their traffic lights with energy-efficient traffic lamps, which use 80 percent to 90 percent less energy. “Change a Light” campaigns also are under way in many of these communities to encourage residents to use energy-efficient light bulbs and fixtures in their homes.

- A new 150-foot-high wind turbine in Hull is running the town's street and traffic lights and saving the town's ratepayers $130,000 a year on their electric bills. Meanwhile, Brockton is trying to reclaim an abandoned 10-acre property for the largest solar facility of its kind in New England.
Worcester’s pay-as-you-throw trash recycling program has diverted more than 100,000 tons of trash from being incinerated -- thus saving the city millions of dollars in tipping fees while reducing air pollution at the same time. The city's recycling rate is over 50 percent -- the highest recycling rate of any major city in New England.

The new Michael E. Capuano School in Somerville is using 43 percent less electricity and 24 percent less natural gas due to energy efficiency measures that are expected to save the city $60,000 annually on its energy bills. The school is also getting 9 percent of its electricity from photovoltaic solar panels on the roof.

Cambridge now requires new companies and developers to offer programs that encourage commuting by public transit, biking and walking. One company, Millennium Pharmaceuticals Inc., pays employees $175 each quarter for biking or walking to work and charges them up to $45 every two weeks for using company parking spaces. (Millennium was recently honored by the Environmental Protection Agency as one of 60 Massachusetts employers on the agency's list of Best Workplaces for Commuters.)

From land use to transportation to building construction, local governments have major influence and control over energy-consumption patterns in this country. That’s why the examples above are so important. In addition to providing immediate tangible benefits, they serve as models that other communities can replicate.

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