With Solar Surge, Massachusetts Is Now a 'Sunshine State'

By Tom Philbin

When Governor Deval Patrick came into office in 2007, he set a goal of adding 250 megawatts of solar energy generation in the state by 2017. The administration and the Legislature quickly enacted renewable energy legislation that included new subsidies, tax credits, policies and programs. As a result of these incentives, solar developers over the past few years have inundated municipal officials with renewable energy projects, particularly solar projects. According to the Massachusetts Clean Energy Center, solar installations are in place in a remarkable 340 of the state's 351 cities and towns, with more than 4,600 renewable energy installations across the state. In April, the state hit 100 megawatts of installed solar capacity, with an additional 40 megawatts under contract for installation.

In May, the *Boston Globe* reported that the solar industry in Massachusetts ranks second only to California's in the U.S. That means the Bay State is currently running ahead of Sun Belt states such as Arizona, Florida, Nevada and New Mexico when it comes to generating solar power, according to Ernst & Young, a Big Four accounting firm that tracks the alternative energy industry. Contributing to the surge, the *Globe* reported, is the relatively high cost of electricity here, which makes solar photovoltaic systems more cost-effective, and a 50 percent drop in solar panel prices in the past two years. The story also credits "solar-friendly local policies."

Since 2007, the state has seen a nearly thirty-fold increase in solar photovoltaic installations, and the number is increasing exponentially. In 2007, Massachusetts had just 3.5 megawatts of solar generation capacity. Solar energy installations have far outpaced other renewable energy technology and now double wind power's output of 55 megawatts statewide. More than two-thirds of renewable energy companies work with solar energy, according to the Massachusetts Clean Energy Center's 2011 report on the state of the industry. The number of clean energy jobs in Massachusetts increased at a rate of 6.7 percent between July 2010 and 2011, according to the report. A total of 4,900 clean energy businesses in Massachusetts employ more than 64,000 workers.

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Easthampton's 2-megawatt solar array, which went live on June 8, is one of the largest ground-mounted solar projects on a landfill in the state.

In 2007, the state began to offer rebates to homeowners and small businesses that installed solar panels. The program met its goal in less than two years, with its initial $68 million pool fully committed by October 2009. The program received $1 million each quarter from the Massachusetts Renewable Energy Trust, which has been funded since 2003 by a charge on monthly electric bills.

The state has also taken advantage of $8 million in federal stimulus funds to install solar arrays generating at least 5 kilowatts each in several communities, as well as using stimulus funds to build twelve solar projects at wastewater treatment plants, including the state's largest, in Pittsfield. That project includes more than 7,500 solar panels producing 1.5 megawatts.

In addition to rebates and cash grants, the state also launched a program for solar market credits. Authorized by the 2008 Green Communities Act, the program provides a predictable market for credits that homeowners can generate through their solar energy systems. The credits are sold to businesses or other buyers seeking to offset carbon-based power systems. The new Solarize Mass program encourages the adoption of small-scale solar photovoltaic through a

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coordinated education, marketing and outreach effort, combined with a tiered pricing structure that provides increased savings as more people in a community go solar.

Municipal solar energy projects are moving forward in numerous communities. In Easthampton, a developer is footing the bill for solar arrays on three city-owned sites: a garage, a wastewater treatment plant, and a landfill. The $20 million, 2-megawatt landfill project, which went live on June 8, is one of the largest ground-mounted solar projects on a landfill in the state. The city has contracted with the developer to buy the electricity generated by the solar array at the reduced rate. "We're so pleased," Mayor Michael Tautznik told the *Daily Hampshire Gazette*. "Hopefully our experiences with the project can be an example for other communities. … It's been a challenge, but it's been worth it." The mayor said the solar array could save the city about $90,000 per year. The city's website (www.easthampton.org) features a link to an online production meter showing how much power is being generated at the landfill on a day-by-day basis.

Dartmouth is also working with a developer to build ground-mounted photovoltaic facilities. This most recent of several solar projects in the town will be located on land previously used as a sand and gravel pit and for cranberry bogs. It will also be one of the largest projects in the state.

Communities across the state have been expediting the permit process for solar projects, and installers report that they can often obtain permits within several days. In order to promote solar, the city of Boston has cut permit fees for solar installations by about 70 percent, and the application process can be completed online.