

## POWER IS MONEY:

# Municipal Opportunities in the Deregulated Electricity Marketplace

*By ORLANDO PACHECO*

**F**aced with rising fixed costs, limited revenue options and generally tight budgets, municipalities must take advantage of every opportunity to manage costs. The town of Lancaster is working not only to take advantage of opportunities, but also to develop a synergy between them. By building, owning and operating its own solar farm, pursuing electricity aggregation, and using the resulting revenue to further invest in “green” energy infrastructure, the town is leveraging several opportunities to reduce greenhouse gas emissions and the town’s operating budget at the same time.

In 2008, as Massachusetts was positioning itself as a national leader in renewable energy, the town began looking for ways to take advantage of the new marketplace. Lancaster does not meet the threshold to sustain a wind turbine, so the town decided to pursue solar generation. Seeking an area within town that had limited abutter intrusion, as-of-right zoning, and efficient interconnection processes, the town determined that its capped landfill was the ideal site for a solar array. Plans were set in motion for a 500-kilowatt solar installation, the best size to make the project feasible.

Unlike many similar projects, which are often pursued under a power purchase agreement, the Lancaster solar array will be owned and operated by the municipality. The town found that owning and operating the system would provide greater savings given its level of consumption. No municipal staff will be needed, however, as all maintenance and monitoring will be done through service contracts.

The project, currently under construction, was procured under Chapter 30, Section 39M (one of the sections of state law governing public works contracts). At build-out, it will produce 610,000 kilowatt-hours of electricity per year, partially offsetting municipal (non-school) building use. The estimated direct savings to the town’s operating budget will be \$85,000 annually.

While municipalities do not have access to many of the tax incentives available to private developers, they do have access to low-cost financing, grants and other subsidies to offset the initial cost. With the help of Congresswoman Niki Tsongas, Lancaster received a \$500,000 congressional earmark, meaning the town

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*Orlando Pacheco is the Town Administrator in Lancaster.*



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*A 500-kilowatt solar array is being installed at Lancaster's capped landfill.*

would need to finance \$1.5 million of the project's \$2 million total cost. While projecting costs and developing a model for financing, the town realized it could generate more revenue than it needed to cover debt service and maintenance. That's because solar projects have benefits beyond the electricity that is generated. Solar electric generators may sell Solar Renewable Energy Certificates, typically to energy providers, in order to recover a portion of their investment.

Using the floor price of the SREC market, the town calculated that it could safely generate \$173,000 annually, at a minimum. The principal and interest on the project's debt is less than \$150,000. That not only leaves the project with a surplus, but it also leaves the town with all the "net metering" credits (the electricity sold to the grid) at no net cost to taxpayers, giving Lancaster essentially free power.

In order to isolate the project's debt and expenses from the rest of the operating budget—and to infuse a level of accountability into a project that had many skeptics—Lancaster established a Renewable Energy Enterprise Fund to manage its new "utility." By treating it as a separate department—no different from, say, water or sewer—Lancaster will not have to raise and appropriate any funds from its operating budget to manage the solar array, which is a self-generating revenue source. The surplus funds can be appropriated to continue the implementation of efficiency measures without using property tax dollars.

With the appropriate subsidy, this project could be replicated in any municipality serviced by one of the state's investor-owned electric utilities (National Grid, NStar, Western Massachusetts Electric, or Unitil).

## MUNICIPAL AGGREGATION

The Electric Restructuring Act of 1997 allows anyone to purchase power on the open market with one of the thirty-two regulated suppliers in the Commonwealth. Consumers of large amounts of power stand to benefit from a lower unit price than smaller purchasers. While municipalities are significant consumers, they would become an even bigger player—and would benefit from better pricing—if they were to "aggregate" power purchasing for their own needs as well as for all residents and businesses. The process by which a municipality may aggregate the electrical load for the entire city or town is laid out in state law (M.G.L. Ch. 164, Sec. 134).



*Construction is under way on Lancaster's solar array, which will be owned and operated by the town.*

Municipal aggregation infuses competition into the residential marketplace in a way that does not currently exist. Investor-owned utilities must buy power in six-month blocks, at times when prices are not necessarily competitive. (The markets that affect the price of electricity can be volatile.) Suppliers find it nearly impossible to offer great deals going door-to-door because the cost to introduce the service is high, and the average individual consumption is low. Municipal aggregation enables the supplier to add a large block of business without expending valuable capital for marketing the service. The result is a reduction in the supply cost for the participating electric accounts.

The opportunity for municipalities here is that the investor-owned utilities charge for the service of supplying the power. Municipalities, working through brokers, can take advantage of this charge as a revenue source. The only major requirement—not withstanding a knowledge of aggregation—is that the municipal supply charge under an aggregation program must be lower than that of the investor-owned utility when the power is procured.

With approval of the Department of Public Utilities, a municipality, or a group of municipalities such as the Cape Cod Light Compact, may not only aggregate electric users, but also access energy efficiency funds to help residents and businesses reduce overall electric consumption. Municipalities, or the regional entity, must have a plan for how it will use the funds and achieve its goals. As a smaller community (pop. 8,000) with

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limited administrative and resource capacity, Lancaster is choosing to leave the funds in a pool administered by National Grid. Lancaster residents and businesses will have equal access to the fund should they need it for efficiency projects. Larger communities that have adequate staffing and understanding may want to access those funds.

Lancaster's aggregation plan went before the Department of Public Utilities for a hearing in late June. The town plans to have the program running in the fall.

## ENERGY SYNERGY

There is a synergy between these two areas of energy policy. Municipal aggregation, in Lancaster's case, is providing access to a supplier on a book of business of more than 20 million kilowatt-hours. One benefit of this process—beyond those already stated—is that there will need to be additional compliance with the renewable portfolio standard. This means that the supplier must obtain a certain portion of its overall service load from “green” sources. In order for the supplier to comply, it will buy SRECs from the town's landfill solar array through a long-term contract. The long-term contract benefits the town by providing a higher sale price than the floor. This boosts the financial viability of the project and will provide for a larger net revenue surplus.

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The town's SRECs could be sold in the spot market and might yield better financial results, closer to the \$600 ceiling, but municipal staff do not have the time or ability to monitor the SREC spot market. The stability of a long-term

contract provides a great revenue source that surpasses the options provided by the state-run SREC clearinghouse.

Several years ago, for budget reasons, Lancaster was forced to turn off most streetlights. Now, the town is planning to invest its aggregation revenue in acquiring its streetlights from National Grid. Once this is accomplished, the town will swap out the existing bulbs with more efficient light-emitting diode (LED) bulbs. By using non-tax dollars to pay for the acquisition and capital cost, the town can turn on more lights, and use less energy, at the same overall cost. This helps the town to restore certain services without an impact on the tax levy.

Cities and towns have an opportunity to use aggregation to benefit constituents on two fronts: as taxpayers and as ratepayers. The ability to add competition to the supply market can, when properly managed, create savings for consumers and revenue for cities and towns. The cumulative savings of these efforts statewide could be in the millions. The ability to own and operate solar or wind power generation can result in highly discounted—if not free—power. The marriage of green energy generation and municipal aggregation can create funding for capital investments, such as streetlight ownership and efficiency measures, that lead to a decreasing dependence on property tax dollars to maintain a particular service. ❁