Howard County School Benefits From SOLAR POWER

The Northeast Maryland Waste Disposal Authority (the Authority) issued procurement documents for solar energy development at the New Cut Road Landfill in August 2009. This procurement was at the request of the Howard County Department of Public Works (County DPW), which wanted to develop a solar project at the New Cut Road Landfill in Ellicott City (Landfill), MD. The electricity generated from the array was to be supplied to the adjacent Worthington Elementary School (School).

The County DPW, the Howard County Board of Education and the Authority reviewed proposals and selected Sun Edison as the preferred vendor for the purpose of negotiations. The four parties entered into intense negotiations for the development and operation of a solar array at the Landfill. The resulting 20-year Power Purchase Agreement (PPA) is protective of the environmental controls at the landfill and will result in the County realizing approximately $500,000 net present value savings for electricity over the course of the PPA term.

The Authority applied for and received a grant from the Maryland Energy Administration (MEA) to finance the project. The Authority Board, Howard County Board of Education and the Howard County Council all approved the PPA and associated contract documents. The County will hold public meetings in the early fall of 2010; construction of the array is anticipated to start in late fall 2010 with a project commissioning no later than June 2011. The current design of the array calls for a 450 KW DC system that is projected to produce over 90 percent of the School’s needs on an annual basis. The array will be a showcase project that represents positive cross-agency cooperation for the beneficial use of otherwise dormant land.

For more information, call Andrew Kays at 410.333.2730.
It's Easy to Recycle!

The building management for the Authority’s offices has implemented an office recycling program. The Authority recently hosted a meeting with tenants and representatives of building management to explain the new program. In the initial phase of the recycling effort, staff will deposit all paper, plastic and cardboard into specifically marked plastic containers. Building Manager Barbara Etzel indicated that the eventual goal is for all office waste baskets to be used as recycling containers, which will be emptied by the cleaning service each evening. When that plan is implemented, staff only will have to take food waste to the kitchen. Barbara added that staff had been taking recyclables home on a regular basis—thanks, Diane and Steve! Building management has contracted with Allied Waste Services as the vendor for this work.

Montgomery County Improves Recycling Efforts

Montgomery County passed an amendment proposed by Executive Ike Leggett that the County recycle, reuse ash residue, and improve recycling of construction and demolition debris. These actions, Mr. Leggett stated “will reap financial and environmental benefits for the County.”

Ash residue from the County’s Resource Recovery Facility (RRF) will be reused and recycled. The recycling of construction and demolition (C&D) debris will be increased under this amendment to the County’s waste transportation and disposal contract.

Under the terms of the amendment, the County will receive a credit of $2.50 for each ton of ash beneficially reused or recycled. The County also will receive 17.5 percent of sales revenues from any additional metals recovered from the ash (most metals are already removed and recycled at the RRF). Savings on the approximately $11 million per year waste transportation and disposal contract with Union County Utilities Authority Members Build More Renewable Energy

Anne Arundel County is now on its way to using its landfill gas to its benefit, both environmentally and financially. On Aug. 2, the Anne Arundel County Council approved the Landfill Gas to Energy (LFGE) Project at the Millersville Landfill and Resource Recovery Facility, and the Authority’s board approved the project two days later. This project is unique compared to other LFGE projects the Authority has assisted in developing—funds from the Federal Energy Efficiency Block Grant will be utilized for a portion of the capital costs. This LFGE facility will use two Caterpillar 3520 internal reciprocating engines, which combined will produce 3.2 megawatts of renewable or “green” energy and is anticipated to be online within 12-18 months. The facility will capture the landfill gas currently being flared and turn it into electricity, while also generating renewable energy credits (RECs). The greenhouse gas reduction benefits of this facility are equivalent to removing annual emissions from 2,800 vehicles or planting 3,100 acres of forest each year. It will generate enough electricity to power 1,890 homes.

The building management for the Authority’s offices has implemented its Recycle! It’s Easy to Recycle! program two days later. This project is unique compared to other LFGE projects the Authority has assisted in developing—funds from the Federal Energy Efficiency Block Grant will be utilized for a portion of the capital costs. This LFGE facility will use two Caterpillar 3520 internal reciprocating engines, which combined will produce 3.2 megawatts of renewable or “green” energy and is anticipated to be online within 12-18 months. The facility will capture the landfill gas currently being flared and turn it into electricity, while also generating renewable energy credits (RECs). The greenhouse gas reduction benefits of this facility are equivalent to removing annual emissions from 2,800 vehicles or planting 3,100 acres of forest each year. It will generate enough electricity to power 1,890 homes.

Model Shows Link Between GDP, Waste

A recent study has shown that a change in the amount of garbage generation is a leading indicator of changes in gross domestic product (GDP) on a quarter-by-quarter basis. In fact, as the GDP drops, so does waste tonnage in a predictive manner that is consistently accurate—within four to five percent—among ten years of waste generation data from Union County Utilities Authority (UCUA). “We have also found that, at least in Union County, change in employment relates well to changes in waste,” says Sumil Garg, executive director of UCUA, who led the team that parsed out statistics from GDP, waste tonnage, and other economic indicators to reveal clear and intriguing trends. “We see that employment numbers allow us to predict waste numbers about two to three months ahead of time. We used our model to the end of December of 2009 to predict the tonnage for Union County in the first quarter of 2010 and were accurate to about 4.5 percent. That is very good in this business.”

Garg explains that it does make sense—if people are not buying, they are not throwing out. If they are feeling pinched financially, they stop buying discretionary items, thereby generating less waste. Because authorities such as UCUA—an energy-to-waste facility managed by the operator of the Harford WTE Facility, which celebrates five years of no lost-time accidents.

CONGRATULATIONS to EROI, the operator of the Harford WTE Facility, which celebrates five years of no lost-time accidents.

With the help of this analysis, Garg says his facility is one of the only municipal services in New Jersey that did not have to raise disposal rates in the past two years when it collected a deficit of 70,000 tons of waste and lost $2 million to $3 million in revenue. These models, developed with colleagues from HDR, an architectural, engineering and consulting firm in Boston, will allow Union County to predict the amount of waste it can expect, and act accordingly.

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