NAWTEC 19 BRINGS WASTE-TO-ENERGY PROFESSIONALS TO PENNSYLVANIA DUTCH COUNTRY

The 19th Annual North American Waste-to-Energy Conference (NAWTEC) was held last month in Lancaster, PA. Sponsored by the Solid Waste Association of North America (SWANA) and hosted by the Lancaster County Solid Waste Management Authority (LCSWMA), this three-day conference is the largest annual gathering of individuals and business pertaining to energy-from-waste in the country. Approximately 500 professionals from North America, South America and Europe gathered to network and hear the latest in the development of new projects and technologies, as well as to learn strategies for improving the operation of existing facilities. Over 50 companies participated in a trade show during the conference, exhibiting resources useful to waste-to-energy professionals and facilities.

Discussed at the conference was the ongoing development of a new WTE facility in Durham, Ontario, Canada. This 140,000 metric ton per year facility is scheduled to open in September 2014 and would be the first newly developed facility to operate in North America since the Authority's Montgomery County Resource Recovery Facility began operation in 1995. It will generate 17.5 MWh of energy for the surrounding community while disposing of waste that until recently was being shipped to Michigan and New York. Sessions were generally divided into two categories:

- Project Development and Technology. Among the topics discussed relating to Project Development was the expansion of waste-to-energy plants in Hawaii and Palm Beach, Florida, the development of a new WTE facility in Copenhagen, Denmark (complete with the building doubling as a downhill ski slope) and a review of EPA policies related to the WTE industry. Technical presentations dealt with topics such as protection of boilers through different cleaning and refractory solutions, the recycling and reuse of ash residue, and new and different methods for reducing emissions of pollutants into the atmosphere.

- During the conference, the Covanta Alexandria/Arlington WTE Facility was honored by the American Association of Mechanical Engineers, an honor previously bestowed upon the Montgomery County Resource Recovery Facility in 2000. Additionally, the news of Governor Martin O'Malley signing legislation making waste-to-energy a Tier I renewable resource, had reverberations across the conference as it was hailed as a positive step in the development of new projects in Maryland and across the country. LCSWMA was a tremendous host for the conference and concluded with a tour of the LCSWMA's Resource Recovery Facility. This 1,200 ton per day facility began operation in 1994 and produces 35.7 MWh of renewable energy that is sold to the local utility. Somewhat unique is that the plant is a “zero discharge” facility where all of its on-site generated waste water is reused in the waste management process. The facility also has a public drop-off center where residents bring their household waste for disposal. NAWTEC 20 is scheduled to be held in Portland, ME in April, 2012.
on April 18, 2011, elected officials, County staff and other dignitaries gathered at the Montgomery County Transfer Station in Germantown, MD to celebrate the installation of the roof mounted solar array. The work of bringing the project to completion of the operational status of the array started twenty-two months earlier. The Northeast Maryland Waste Disposal Authority (the Authority) issued a Request for Proposals (RFP) on behalf of Montgomery County (County) for the development of solar energy at publicly owned solid waste transfer, recovery, recycling and composting facilities in the County. The County elected to engage the Authority for the procurement of solar energy under the existing intergovernmental agreement between the County and the Authority. The RFP was issued on February 4, 2009. The Authority requested traditional power purchase agreement terms as well as a lease term for the solar array in the RFP. In this second option, the vendor would have the opportunity to use the roof space and sell the electricity to the grid. At the County’s request, a novel approach for the vendors was also included as option three in the RFP. For this third option, the vendor would retain all Renewable Energy Credits (REC’s), environmental attributes, tax credits and other credits accruing to the owner of the system and sell electricity to the Authority and provide alternative RECs equivalent to the production of the system.

The evaluation committee reviewed the proposals and made the recommendation to award the project to SunEdison. The power purchase agreement stipulated that the vendor supply solar RECs equivalent to the annual production of the array for the term. On July 7, 2009 the Montgomery County Council approved the recommendation of award and signed a Task Order with the Authority for the development of the solar project at the Transfer Station.

SunEdison began the process of finalizing financing for the project in preparation for construction. Shortly thereafter, the Renewable Energy Credit (REC) market in Maryland collapsed and the project was halted.

Montgomery County Transfer Station celebrates the installation of the roof mounted solar array.

Fast forward almost a year later and the project was revived when the Authority was awarded two of the initial twenty grants under the Maryland Energy Administration’s (MEA) Project Sunburst program. MEA received funding through the United States Department of Energy, State Energy Program and such funding was made available pursuant to the American Recovery and Reinvestment Act of 2009. The Authority was awarded a grant for the Montgomery County project as well as a grant for the New Cut Road Landfill Solar Project in Howard County. Robin Davidsen highlighted "the assistance and support of Governor O'Malley's Maryland Energy Administration and the Project Sunburst grant," at the Ceremony. "This project would not have been successful with out the Governor's renewable energy leadership."

Construction of the array began in earnest in early July of 2011; almost a year to the day that the Power Purchase Agreement (PPA) was signed between the Authority and SunEdison. The Transfer Station is considered an attractive solar site with minimal shading, relative young age of the roof and existing electrical demand. The main Transfer Station roof is about 57,500 SF, the roof on the new additions to the Transfer Station building is about 37,700 SF. As required in the RFP, SunEdison installed American made components for the Project using local contractors for the installation work. Next a major storm hit the site on July 25, 2011, resulting in roof damage and construction setbacks. The County, the Authority, the Authority’s contract Operator of the Transfer Station (Coventa Montgomery Inc.) and SunEdison worked through the additional challenges to complete the work. The grant was used by the project developer, SunEdison, to reduce the overall costs of the Project to the ratepayers in the County. The County paid no upfront costs for the array and will instead pay a fixed kW hour rate for the twenty year life of the PPA. The County will receive Solar Renewable Energy Credits as part of the PPA in an annual amount equal to the production of the array. The County will be paying a lower rate for the electricity than the current power contract at the Transfer Station for the electricity produced at the transfer station. Even with the purchase of the RECs the County will save an estimated $200,000 over the twenty-year term. The array is designed at 286 kWDC and will generate approximately 34,110 kW hours of electricity in the first year of operation; equating almost 1/3 of the electricity needs of the administration portion of the Transfer Station. In other words, the array will generate, on average every year, enough clean energy to power 30 homes.

The Project was ceremoniously turned on during the April 18, 2011 event by County Executive Isiah Leggett, Authority Executive Director Robin Davidsen and MEA Director Malcolm Woold. The Project had been providing electricity to the Transfer Station since March. During the event County Executive Leggett noted "Montgomery County is a nationally recognized leader in advancing clean energy and promoting sustainability, and although this may be a small project in the terms of output compared to some of the others, rest assured, it is a big deal for us to be able to do our part to produce clean, renewable energy."

For more information about the Authority’s solar procurements or the Montgomery County contract please contact Andrew Keys at akays@wmmda.org or 410-333-2730.

County Executive Isiah Leggett (right of the switch), (from left) Frances Tubbs, Manager, SunEdison; Malcolm Woold, Director of the Maryland Energy Administration (MEA) and Robin Davidsen, Executive Director of the Northeast Maryland Waste Disposal Authority symbolically “flipped the switch” for the solar array on April 18, 2011.
AUTHORITY LANDFILL
GAS-TO-ENERGY
FACILITIES UPDATE

The Frederick Landfill Gas-to-Energy Facility has been in commercial operations for one year. In that time the facility has produced over 13,900 Megawatt Hours (MWh) of renewable or green energy. The green energy produced is the equivalent of removing 1,882 cars from the road for one year or avoiding consumption of over 1 million gallons of gasoline!

The Oaks and Gude Landfill Gas-to-Energy Facilities in Montgomery County, MD have been producing renewable energy since June 2009. These two facilities have produced approximately 39,070 MWh of green energy, which equates to eliminating 5,282 vehicles from the road for one year or avoiding the consumption of over 3 million gallons of gasoline!