

Recycling Coordinator's 2008 Year End Report

Ground Breaking Ceremony on September 16, 2008 Marks the True Beginning of the Long Awaited Landfill Gas Utilization Project

Written by Sharon A. Driscoll, Recycling Coordinator

The ground work for a Landfill Gas Utilization (LGU) project at the Madison County Landfill fell into place in 2007, after a 10 years struggle to bring this project to fruition. In 2008, County officials and others involved in the LGU project began dotting the “i’s” and crossing the “t’s” to form a public-private partnership between Madison County Board of Supervisors and Waste Management Renewable Energy, LLC of Houston , Texas.

Crews started clearing the site for the new building that would house the generators that turn the methane gas into electricity; Contracts with Waste Management Renewable Energy LLC were scrutinized and put in place; negotiations began in earnest with National Grid, plans to utilize the waste heat produced by the generators to heat the ARC MRF were laid out and a Ground Breaking Ceremony was scheduled to mark the construction of the Landfill Gas Utilization building. (See the Recycling Coordinator's 2007 Year End Report for a more complete accounting of the LGU project – on line at madisoncounty.org)

Waste Management will design, build and operate the facility. Under a 20-year agreement, Madison County will receive estimated annual revenue of \$350,000 from WM for ongoing rights to all landfill gas, as well as a share of electricity sales from the project.

Director James A. Zecca, who has long been an advocate of the LGU project, explained that the project is estimated to produce 1.3 megawatts of electricity. Based on the Dept of Energy's estimate that an average home uses 10,656 kilowatt hours of electricity per year, the 1.3 megawatt project would provide electricity for 1,050 homes, or a community about the size of the Village of Cazenovia.

The annual reduction of greenhouse gases attributed to Madison County Landfill's LFGTE project is equivalent to removing 8,034 cars from the road, reducing oil consumption by more than 102,007 barrels, or planting nearly 9,969 acres of forest, as calculated by the US Environmental Protection Agency's Landfill methane Outreach Program.

During a Joint meeting of the Solid Waste and Recycling Committee and the Finance

Ways and Means Committee on November 19, 2008, it was decided that a Special Account would be set up by the County Treasurer for revenues generated from the LGU project. It was the intent of both committees these funds be use for special economic development projects: The first of which is to develop water and sewer access to serve the ARE Park. The ARE Park is a business park planned for areas in and around the

Buyea Rd. Landfill. An RFP was sent out mid-January 2009 to see what types of Businesses are interested in locating in the Town of Lincoln and taking advantage of low cost waste heat and possibly electricity that is being produced through the LGU project. Also, an agreement was reached at the Joint meeting that some of the funds from the LGU project would be used to reimburse the Solid Waste Dept for its investments in the research and development of the LGU project over the past ten years.

The following is a bit of research on LGU Projects: Landfill Gas to Energy Projects helps destroy Methane, a potent greenhouse gas, and offset the use of non-renewable resources such as coal, natural gas and oil. Of the 2,300 or so currently operating or recently closed MSW landfill in the United States, about 380 have LGU projects. According to Renewable Energy Technologies, it is estimated that approximately 600 more MSW landfills could turn their gas into energy, producing enough electricity to power over 900,000 homes.

It should be noted that Municipal Solid Waste Landfills are the largest human-generated source of methane emissions in the United States, releasing an estimated 38 million metric tons of carbon equivalent (MMTCE) to the atmosphere in 2004 alone. Methane is a very potent greenhouse gas that is a key contributor to global climate change (over 21 times stronger than CO₂). Methane also has a short (10-year) atmosphere life. According to Renewable Energy Technologies “reducing methane emissions from SMSW landfills is one of the best ways to achieve a near-term beneficial impact in mitigating global climate change.

The LGU project generates revenue for Madison County and creates jobs associated with the design, construction, and operation of the energy recovery system. The LGU project involves engineers, construction firms, equipment vendors and utilities end-users of the power produced. Follow on development of the ARE Park facilitated by utilization of the waste heat could create numerous additional jobs.

County’s Recycling Programs

Madison County has a number of recycling programs that assist residents with their recycling needs.

The switch over from analog to digital is expected to put a bit of a strain on Madison County’s electronic recycling program in 2009. However, Madison County was ahead of its time in 2005 when a mandatory electronic recycling program was established. This program puts Madison County in a good position to collect cast off analog televisions because after participating in the program for the past three and a half years residents are well aware of how and where to recycle computer monitors and televisions.

For those who are not familiar with this program computer equipment monitors and televisions can be recycled at any to the County's four transfer station during normal operating hours. Hours of operation are listed on the County web site at madisoncounty.org , in the County's Recycling Guide or by calling the Solid Waste Hot Line at 1-800-721-2208.

In 2008, the County recycled 1,009 computer monitors and 1,409 televisions for a total of 74.12 tons of electronic material. This tonnage was approximately 10 tons more than collected in 2007.

The push to keep computer monitors and televisions out of the landfill is because they contain mercury, lead and cadmium. Cadmium is a soft malleable toxic bluish white metallic element. Mercury and lead are cumulative chemicals [meaning they can build up over time]. If computer monitors and televisions were allowed to be disposed of in our landfill cell the solid waste leachate could turn into hazardous waste leachate. The cost of disposing of hazardous waste leachate is cost prohibitive.

Other Recycling Programs

The County recycling coordinator continues to add new items to the list of items that can be recycled. For several years now, Madison County has been accepting plastic retail bags for recycling. Other programs that are sometimes forgotten include the recycling of cooking oil, aerosol cans, license plates, pizza boxes and inkjet cartridges.

Household Hazardous Waste

Madison County also conducts an ongoing, user friendly, household hazardous waste [HHW] program. This program is available to residents five days a week all year long. Appointments are necessary for participation in this program. Residents that sign up are eligible to dispose of 14-wet gallons and 20-dry pounds of HHW for FREE at Environmental Products and Services in Syracuse, NY.

To make things easier for resident's appointments can be made via the internet or by calling 1-800-721-2208 and requesting a HHW reservation form be sent to their home. This program is practically funded by the Department of Environmental Conservation [DEC]. In 2008, Madison County collected 78 tons or 156,000 pounds of hazardous material (kept it out of the landfill). The cost to recycle this material was \$10,365.00. The County will be reimburse \$5,182.98 through the DEC HHW Grant.

Free Shredding of Confidential Documents

The Free Shredding Event held June 21 in the parking lot of the County Office Building was deemed a success by the Madison County Dept of Solid Waste and ProShred Inc. of East Syracuse when the final tally came in just shy of 4,000 pounds of paper shredded!

The second Free Shredding Event was held on October 25 was successful even though it never stopped raining from 8:30 a.m. to noon; collecting well over 4,000 pounds of material.

As we hear more and more incidents of identify theft residents are reluctant to throw personal and confidential information into the trash. The County received numerous calls from residents asking when the next shredding day will be scheduled.

Recycling Guide

The County's Recycling Guide was once again revised in 2008. The Recycling Guide is available in the lobby of the County Office Bldg. in Wampsville and at the main landfill office on Buyea Rd in the Town of Lincoln.

The Recycling Coordinator hands out Recycling Guides at all presentations and they are generally mailed and/or delivered to various town and village offices through out Madison County.

New Recycling Bins

The last time the County distributed a large quantity of free recycling bins was in 1990 when recycling became mandatory in Madison County. This distribution was made possible through an equipment grant awarded by the New York State Department of Environmental Conservation [DEC].

The County Recycling Coordinator Sharon A. Driscoll applied for an equipment grant in 2008 and hopes to see that grant awarded. Driscoll's objective was to distribute 35,000 new recycling bins to the residents of Madison County over a three to four year period. The grant request was for \$165,000, half of which would be funded through the DEC's equipment grant: \$82,500.00.

The Solid Waste and Recycling Committee agreed to purchase 500 recycling bins (no grant involved) in 2007. However, that is a small amount of bins compared to the growing need. In 2008, the committee agreed to allow Driscoll to advertise for bids to purchase 2,000 bins. Of the bids received, Busch Systems Int'l. Inc of Barrie, ON presented the best price at \$18,090.00 for 3,000 bins. The price was well below what was expected and the Committee agreed to allow Driscoll to purchase 3,000 rather than the 2,000 first decided on.

If the DEC Equipment Grant is awarded, it will fund half of the purchase price for the 3,000 bins purchased in 2008. And, if the County moves forward with this program it will unfold over a period of three to four years. Thus, at the end of that time period everyone in Madison County will have a new recycling bin.

Each bin that is distributed will have an updated Recycling Guide inside.

The other exciting component of this program is the Recycling Coordinator's hope to increase recycling in all County school districts. Free bins are being given to schools interested in improving their recycling programs.

Driscoll met with three school districts toward the end of 2008 and has set up a tentative time frame to deliver new recycling bins to these schools. She also plans to visit the schools putting on Recycling Presentations and promoting recycling – getting the

students and faculty involved. “It will take a few years to contact, visit and deliver new bins to all of the schools in Madison County, but this is my goal and I am determined to help each and every school in the County improve their recycling programs,” explained Driscoll.

Landfill and Recycling Center Tours

The numbers for those participating in tours and recycling presentations remained steady in 2008. Approximately, 386 people participated in landfill and recycling center tours and 661 people attended recycling presentations for a total of 1,082. This was down just slightly from the previous year.

Tours of the landfill and ARC Recycling Center are conducted in the spring, summer and fall by the County’s Recycling Coordinator. During 2007, 489 students and adults participated in tours and 650 people participated in recycling presentation for a total of 1,139.

The drop in attendance for tours is in part due to the rising gasoline prices experienced in 2008 causing school districts to either cut back on field trips or cancel them all together. The economic crisis currently affecting our county will more than likely deter field trips in 2009.