

THE ENERGY EFFICIENCY & RENEWABLE ENERGY TRACKER

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People & Places

Utilization of Landfill Gas in West Virginia Increasing

Several recent developments in landfill gas-to-energy are increasing the usage of energy contained in methane generated by landfills in West Virginia. One facility is currently under construction, another was activated in March, and a third that was deactivated in 2016 has a new owner.

In January 2017, construction began on a plant in Berkeley County that will use materials in the municipal solid waste stream to produce a “solid recovered fuel” that can be co-fired with coal. This process will take in up to 120,000 tons of waste per year, separate out plastics, aluminum and other metals for recycling, then utilize leftover materials to supplement coal in production of cement. The project will be operated in conjunction with the county’s recycling program and via a partnership with Entsorga. The system will increase recycling rates for the City of Martinsburg, and is scheduled to begin operations later this year.

In March 2017, the Raleigh County Solid Waste Authority (RCSWA) began generating electricity with gas produced at its landfill. Currently the landfill can produce 1.3 MW, although this will soon double with the installation of a second engine for 2.6 MW total capacity. Prior to activation of the facility, the RCSWA burned off excess gas with a flare. The project was designed and developed by Cox Enterprises.

After closing in 2016 due to insufficient quantities of gas, the Charleston Landfill gas-to-energy plant has a new owner. Tallarico Energy, also known as Power Parts Supply, purchased the plant this year and plans to redesign it for direct gas use. Gas created at the fill will no longer be used to generate electricity but will instead be stripped and sold directly to Mountaineer Gas Company.

The Wetzel County landfill has been using its gas for energy since 2003. That LFG is used to power a boiler which heats leachate, water that leaches from the landfill, for pretreatment.

Sources: Raleigh County SWA, City of Charleston, EPA and Entsorga WV

Utilities

Energy Efficiency Conference Held June 13

The WVDOE’s “Economic Development Through Energy Efficiency” conference took place June 13 at the Embassy Suites in Charleston. This event was centered around the idea of using energy efficiency to reduce operating costs and create jobs. Presenters were:

- WV ASHRAE and USGBC - conversational discussion about new EE activities, creating a market and workforce for EE, and future technologies
- Energy Efficient WV – EE policy such as commercial benchmarking and residential disclosure, and the future of energy efficiency in West Virginia
- ARCEE Project - West Virginia building codes and training of individuals to become certified HERS trainers to conduct residential energy audits
- Berkeley County Schools and CMTA Energy Solutions - current and recent installation of energy efficient systems in Berkeley County schools, both new schools and retrofits, including the use of passive geothermal energy
- Simonton Windows – EE upgrades to plants in West Virginia, including air compressors and the firm’s ENERGY STAR products
- Bimbo Bakeries – recent and planned EE upgrades to the Heiner’s bakery in Huntington, including potential use of an anaerobic digester using production waste
- WVU Industrial Assessment Center, Programs with Industry and the Building Energy Use Center - programs that allow engineering students to perform energy audits and design more energy efficient systems for regional businesses and schools that choose to participate
- WV Office of Economic Opportunity – program that provides weatherization for low-income homes using USDOE and utility funds
- National Energy Education Development (NEED) – energy curriculum and training for K-12 teachers
- Appalachian Power - new energy efficiency programs proposed for 2018, and use of existing demand response program
- FirstEnergy - Phase I and II of the utility’s EE programs in WV and its programs in PA, OH and MD
- ZMM Architects – current EE retrofits and other renovations of the Charleston Civic Center under construction

Appalachian Power's New EE/DR Program

On March 31, Appalachian Power filed a petition to expand the EE/DR programs offered to their customers. These expansions include:

- Multifamily Direct Install – provide discounts on lighting, energy kits, smart plugs, weatherization, and other technologies for multifamily parties, combining energy assessments and installation of retrofits by a single contractor
- Small Business Direct Install - this program provides the same technologies as the multifamily except for small businesses
- Bring Your Own Thermostat – a demand management program where customers purchase a device that manages energy usage, designed to increase participation in DR initiatives
- Volt Var Optimization – this is an expansion of an ongoing project to reduce line loss on the distribution system

The expanded programs would increase the annual EE/DR budget to \$11.5 million for July 1, 2017 through June 30, 2018 and \$13.4 million for the following 12 months. If these programs are approved by the WV PSC they will officially begin January 1, 2018.

SOURCE: Appalachian Power and WWPSC.



Local Report Released on Industrial EE in WV

In May, the WVU Center for Energy and Sustainable Development and the WVU School of Law released a report titled "The West Virginia Jobs Project: A Guide to Creating Jobs in Industrial Energy Efficiency." The report is focused on potential economic benefits from improving industrial EE in West Virginia, including growth in global demand for exports, cost savings for firms and utility customers, and an associated increase in jobs for West Virginia residents.

A main premise of the report's recommendations is the industrial sector's large role in energy consumption, accounting for almost 40% of all energy consumed in the state, and its role in technological innovation. There is potential for industrial EE to dramatically reduce energy use, and in so doing enable and develop technological innovation that can increase exports of products and services. Energy savings could also be realized by the commercial and residential sectors.

A major opportunity is in rising global demand for industrial energy efficiency products, which the report argues West Virginia is well-positioned for given its large industrial manufacturing base, energy-focused research institutions, and readily available workforce. West Virginia-based universities and facilities already possess the expertise needed to pursue industrial EE technology and assist in growing localized clusters of interconnected companies and institutions that could produce this innovation.

Recommendations include developing ways to expand the State's industrial EE sector and supply chain, promote a more innovative

small business culture, increase access to capital, support training in the EE industry, including at high schools and community colleges to encourage more young job seekers to enter the skilled trades professions, and create demand for industrial EE technology via State policy.

The report also identifies barriers to achieving these benefits, such as lack of state policies that promote EE, inadequate access to capital for innovators and entrepreneurs, and limited energy efficiency incentives for industrial customers.

SOURCE: West Virginia University, Center for Energy and Sustainable Development and WVU School of Law.

Funding/Financing

Next USDA REAP Deadline is October 31

The next deadline to apply for loans or grants under the USDA Rural Energy for America Program (REAP) program is October 31, 2017. This program provides guaranteed loans and grants for renewable energy and energy efficiency projects, and has funding dedicated to projects based in West Virginia.

For more information about the West Virginia program call (304)284-4882, email jesse.gandee@wv.usda.gov or visit www.rd.usda.gov/programs-services/all-programs/energy-programs.



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