April 2010

The Hartselle Connection

Serving Hartselle's People, Building for Hartselle's Future

Hartselle Utilities Going 'Green' At WWTP

Upon final approval by Alabama Department of Environmental Management (ADEM), Hartselle Utilities will install two money-saving "green" projects at the Wastewater Treatment Plant later this year.

In December 2009, Hartselle Utilities pre-applied for a loan from the State's Clean Water State Revolving Fund (CWSRF) for the construction of a Reuse Water System, Waste Sludge Management Facilities and a Septage Receiving Station. All of the projects were designated as "green" projects by ADEM, says HU General Manager Ferrell Vest. The Loan Pre-application made the cut of the first pool of applicants, and HU staff hopes the final loan application will be approved in early May.

Loans from the CWSRF are low interest, and can fund up to 100 percent of a project, unlike grant programs which require a utility or city to provide up to 50 percent matching funds. A green designation allows ADEM and the CWSRF to forgive a portion of the debt, possibly up to 50 percent of the total loan.

The Reuse Water Project proposes to reuse treated water from the plant that is discharged to Shoal Creek. While this treated water isn't potable – it cannot be used for drinking or cooking – it can be used for operations throughout the plant. Currently, says Vest, the plant purchases about one million gallons of potable water each month, and 99 percent of that can be replaced by reusing treated water from the plant. "This will lower our ongoing operating costs, and help support our environment as well," says Vest.

Installing new reuse water lines and pumps will distribute the treated water and incorporate it into plant operations at an estimated cost of $108,240, says HU Engineering Services Manager, Wayne Roberson. The savings in cost of potable water purchased will repay the construction cost in a little over three years.

Although some of the sludge produced by the wastewater treatment plant is recycled to feed treatment processes at the plant, it eventually becomes waste sludge. The waste sludge is held in a sludge pond where it continues to break down and concentrate, but never goes away. The current sludge pond was built in 1987, and sludge build-up over the years has diminished the holding capacity of the pond, says Vest. Basically, he says, "The sludge pond is full, and this is a problem which must be addressed immediately." Ultimate disposal of the sludge must comply with EPA Part 503 regulations.

Most modern wastewater treatment plants include a belt press, centrifuge or more extensive operations in the design to dewater sludge and dispose of leftover solids. Vest says that HU consultants estimated the cost to install a centrifuge process is $4.5 million. "That doesn't even include the $550,000 turn-key operation to drain the existing pond to treat and dispose of the sludge that is already there," he added.

Later this year, crews at the Hartselle Utilities Wastewater Treatment Plant hope to use a remote-control operated dredging system, similar to the one shown here, to begin removing sludge buildup from the plant's only sludge pond. The pond, says HU General Manager Ferrell Vest, is full, and the sludge problem must be addressed as soon as possible.

After researching their options, HU staff found a much less expensive alternative, says Roberson. Portable sludge dredging equipment and Spectrum Phase Separators can be installed at an estimated cost of $646,900. This system pumps the sludge through a polymer feed station and then on to gravity dewatering boxes to separate the solids. The separators process the sludge at 250 to 350 gallons per minute concentrating the sludge to 15 percent dry solids. The dewater solids can then be disposed at an ADEM approved sanitary landfill such as the Morgan County Landfill. The portable system does not require a building, and it uses 62 percent less power than a permanent centrifuge. In addition, the sludge processing method meets ADEM's requirements as a "green project."

"This will take care of our immediate problem, which is the existing sludge," says Vest, "plus, being portable, we can then use the system to clean any sludge build-up out of our two holding lagoons to increase their capacity, as well."

In the future, waste sludge from the treatment plant will go directly to the dewatering system for immediate disposal off-site.

TVA Fuel Cost Adjustment for April

The FCA for April, which is set by TVA and affects the electric portion of your HU bill, reflects a $4.16 increase. However, decreases due to usage over last March-April should lower the average bill by about $10.99, for a net projected monthly decrease of $6.83.

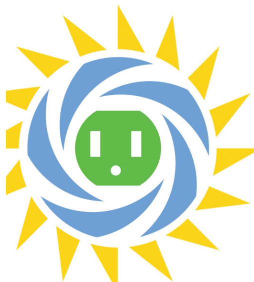
Earth Day Resources for Students

April 22 marks the 40th Anniversary of Earth Day. Teachers, parents and students looking for projects to help celebrate Earth Day can find plenty of resources online at www.tvakids.com.

From online games to printable activity books, teacher resources and, of course, a full history of TVA and electric power generation, the site offers colorful, kid-friendly information.

Green Power Available to HU Customers

Looking for ways that you can help the environment in your home or business? Green Power Switch®, a program available through Hartselle Utilities from TVA, adds electricity generated by renewable energy resources, such as solar, wind and methane gas to the power grid. Currently, renewable energy generation costs more because the technology for capturing this energy is still more expensive than coal, natural gas or nuclear power generation. By supporting Green Power Switch and choosing to buy power from these resources, you can help create a market for green sources of renewable energy, which will eventually lower the cost of this technology.



Customers participating in Green Power Switch agree to buy green power in 150-kilowatt-hour blocks – about 12 percent of a typical household's monthly use. Each block adds $4 to your monthly power bill. The average residential customer in the Tennessee Valley who participates in the program purchases two blocks of green power per month. Small businesses are encouraged to buy at least five blocks per month. Businesses participating in the program receive a colorful Green Power Switch window decal and poster to advertise your commitment to creating a cleaner, greener community.

All power purchased through Green Power Switch is purchased from renewable resources located within the Tennessee Valley, so your participation in the program has a direct impact on our local environment. Over the course of a year, purchasing two blocks of green power, according to TVA's Jennifer Brogdon, Renewable Energy Program Manager, has the same benefit to our environment as recycling 15,322 aluminum cans or planting an acre of trees.

For more information about Green Power Switch, visit www.greenpowerswitch.com. To enroll in the program, complete the form below and submit it to Hartselle Utilities, or call HU Customer Service Manager Terri Harris at 773-3340 or email tharris@hartselleutilities.org.

To enroll in Green Power Switch®, complete this form and return to Hartselle Utilities

☐ I would like to purchase __________ blocks of green power per month at a cost of $4 per block. I understand that each 150-kilowatt-hour block that I purchase increases the amount of energy generated from renewable resources, such as solar, wind, and biomass, that TVA will purchase from sources within the Tennessee Valley.

Name ______________________________ Account Number ______________________

Address ____________________________ Phone Number _______________________

Customer Signature ____

TVA's Generation Partners®

Each month, TVA buys power from 194 homes and businesses that use renewable resources to generate energy. The program, Generation Partners, creates green power for Green Power Switch. Eligible generation includes solar, wind, low impact hydro, and biomass. Participants benefit by receiving payment from TVA for the generated power, along with other incentives.

After a customer installs an approved renewable generation system, TVA will purchase all of the green energy output at HU's retail rate, including any fuel cost adjustments, plus a premium of 12 cents per kWh for solar, and 3 cents per kWh for other renewable generation.

For residential customers, it can take 15-20 years to recoup their investment in renewable power generation, says Jennifer Brogdon, TVA Renewable Energy Program Manager. It generally costs between $7,000 and $9,000 per kW to install a solar photovoltaic system, the most popular type of renewable generation. Program participants receive a $1,000 incentive from TVA to help offset start-up costs, and are guaranteed payments from TVA through HU for 10 years. Additional federal and state incentives are available to non-residential customers, and their payback can be as little as five years.

Additional information about the program is available at www.generationpartners.com, and a list of available incentives is provided at www.dsireusa.org. For more information, call HU Customer Service Manager Terri Harris at 773-3340 or email tharris@hartselleutilities.org.

Johnson New Purchasing Agent

Johnson

Jerry Johnson is HU's new Purchasing Agent. He replaces Linda Huskey, who retired in December. Johnson was formerly the Service Manager for WS Electrical & Air Conditioning Company in Decatur.

"I love this job," Johnson says. "The work I was doing before – contracts for maintenance, buying and managing facilities – was good preparation for the work I'm doing now."

Johnson and his wife, Mandy, have two children and live in Hartselle.

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1010 Sparkman St NW
Hartselle, AL 35640
256-773-3340
www.HartselleUtilities.org