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THE DECISION TO REPOWER A COAL-FIRED PLANT WITH BIOMASS HAS GIVEN A LIFELINE TO ONE OHIO COMMUNITY

At the end of last year, workers at FirstEnergy’s R.E. Burger coal-fired power plant in Shadyside, Ohio, faced a very uncertain future. In 2005, FirstEnergy Corp. signed a Consent Decree with the U.S. Department of Justice and various parties to resolve a case involving its W.H. Sammis Plant. In addition to installing scrubbers and selective catalytic reduction equipment at the Sammis plant, the Consent Decree also called for emission reductions at the Burger plant, which came on line in 1944 and burns approximately 800,000 tons of coal annually.

To meet the terms of this agreement, FirstEnergy had until March 31, 2009, to install scrubbers on two of the coal-fired units at the Burger plant (thus reducing the plant’s sulfur dioxide emissions), repower the units with a different fuel source, or shut down those two units altogether in two years.

Union leaders and local residents petitioned the company to keep the units open. The jobs of the 95 workers employed at the plant were at risk, and the plant’s closing would have had a severe impact on the local economy and community. The Burger plant provides critical support to the local Shadyside school district in the form of property taxes. It currently pays $1.5 million annually in property taxes to Belmont County.

On April 1, 2009, FirstEnergy’s President and CEO Anthony Alexander announced that the company would repower the two coal-fired units at the plant with biomass. That decision allows the company to fulfill its commitment to reducing emissions while also saving jobs at the plant.

“Retrofitting the Burger Plant for biomass will expand our diverse generation portfolio even further and continue our support of state and federal efforts to increase reliance on renewable energy sources,” said Alexander. “And, the project will provide a new and exciting future for the plant and continued economic support in Belmont County.”

The project is also benefiting other companies in the state. FirstEnergy signed an agreement with renewaFUEL, a subsidiary of Cliffs Natural Resources, a Cleveland-based company, to provide the biomass fuel for the project. RenewaFUEL will produce renewable-energy cubes derived from plant material for the FirstEnergy plant.

According to renewaFUEL, burning renewable-energy cubes instead of coal at the Burger plant could eliminate up to 1.3 million tons of greenhouse gases per year, the equivalent of removing an estimated 270,000 cars from the road.

Biomass fuel contains very little sulfur and ash, which means that emissions of sulfur dioxide and particulate matter are significantly reduced compared to burning coal, and nitrogen emissions are halved. Burning biomass at the plant will lower overall emissions more than if the plant had been retrofitted with a scrubber. The scrubber method cuts sulfur dioxide emissions from a coal plant’s exhaust stream, usually by spraying lime or limestone mixed with water into the coal combustion gases.

MEETING STATE LAW

The Burger project also is consistent with Ohio’s advanced energy portfolio standard, which requires that 25 percent of energy sold in the state must come from advanced and renewable energy sources by 2025. State law also requires that one-half of the renewable-energy production come from facilities located in Ohio.

Biomass is considered a renewable resource, so the Burger plant’s electricity production will also qualify for the state of Ohio’s Renewable Energy Certificates (RECs), which are issued when a renewable-energy generator produces electricity that is certified and sold into the wholesale electricity market. Ohio Gov. Ted Strickland and the Ohio state legislature worked to ensure that FirstEnergy would receive additional RECs for the Burger project. The company can use these to help meet Ohio’s renewable-energy standard, but the green energy certified by the RECs can also be sold by the company, which could help offset the estimated retrofit cost of $200 million.

The project could become a model for biomass-fueled plants across the country. When the retrofit at Burger is completed by December 2012, the plant is expected to be one of the largest biomass facilities in the United States, capable of producing enough electricity to power 190,000 homes. The large-scale project could spur further investments in the biomass industry in Ohio as biomass fuel suppliers move into the area to serve the Burger plant. That could create new jobs in the state. The presence of more biomass fuel suppliers could, in turn, encourage more power companies to generate electricity using biomass in Ohio.

If the state does become an even greater leader in biomass and more green jobs are created throughout Ohio, it will not just be the workers in Shadyside that have reason to celebrate.

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