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Ohio biomass decision to impact REC market

Renewable energy developers in Ohio are reaping huge gains selling the environmental attributes associated with the electricity they will create. In a short time span, the Ohio market for renewable energy certificates has grown into the most expensive in the country, driven by a limited supply of in-state renewable projects, brokers and renewable energy developers say.

A decision last week by Ohio regulators, giving the nod to FirstEnergy to earn RECs at its R.E. Burger power plant in Sunnyside, Ohio, from burning wood pellets instead of coal, would therefore seem to represent a potential windfall for the Akron-based company.

Current capacity stands at 312 MW. The plant's size will decrease once the conversion is finished by late 2012, due to the lower heat content of wood versus coal, said Ellen Raines, a spokeswoman for First Energy. The exact capacity will not be known until test runs are conducted, but present forecasts are for around 200MW, she said.

That is still a big facility, but therein lies the catch, brokers say. The Burger plant is so large that, in fact, it will likely flood the Ohio REC market, eventually causing prices to sink.

"The Burger plant is a game changer," said Ryan Cook, a senior broker at Clear Energy Brokerage and Consulting.

Ohio REC prices for in-state generation have steadily increased since early 2009, when Ohio implemented a mandatory renewable electricity standard. REC prices rose from about \$9 to as high as about \$35 at present, Cook said. That is higher than current REC prices in New England, which had been considered the country's steepest, he added.

"It's safe to say the Ohio REC prices are the highest in the country," said Jack Velasquez, vice president for environmental products at Spectron Energy.

In turn, Ohio RECs have encouraged local development in renewable energy projects, he said.

Chris Eastgate, a vice president at Energy Developments, an Australian company that develops and manages power generation facilities using fuel from landfill gas, agrees.

His company, which has facilities in five US states, has invested heavily in Ohio, where it earns RECs, and is expanding operations. Ohio REC prices were "by far the strongest" in the country due to a shortage of renewable projects and increasing demand.

But the outlook for Ohio RECs now appears quite different following the commission's decision on Wednesday. When the Burger biomass plant is online, Ohio REC prices should fall, possibly crashing to as low as \$1 each, experts say.

It is too early to know the number of RECs that the Burger plant will ultimately generate, according to Raines.

But Velasquez said a back-of-the-envelope calculation showed that the Burger plant could yield about 1.5 million RECs a year, assuming a 200-MW capacity.

That is a big amount relative to the market's needs, he noted. In 2013, the total number of RECs required by utilities will be about 3 million, Velasquez said.

The Ohio alternative energy portfolio standard sets a target for utilities to get 25% of the electricity they sell from traditional renewable sources, as well as from "advanced" energy such as clean coal and nuclear, by 2025 and beyond. At least one-half must come from renewable generation located within Ohio, while the remainder must be deliverable into Ohio.

A separate solar carve-out is included within these totals, with the goal of reaching 0.5% solar.

Interim benchmarks, which began in 2009, gave rise to an Ohio REC market. That market consists of four separate products, due to the state's regulations. There are: an Ohio-generated

solar-REC, an adjacent-state solar-REC, an Ohio-generated REC, and an adjacent-state REC.

Prices for the Ohio-generated RECs have climbed steadily, due to a scarcity of supply, said Velasquez. Notably, Ohio lacks wind energy capacity, with only about 4 MW of installed capacity as of June 2010, according to Platts data.

Plans for new wind projects are proceeding, including freshwater wind farms in Lake Erie, which, if completed, will give a significant boost to Ohio's supply of renewable energy.

Focus from outset on biomass

But from the outset, politicians and energy experts focused on Ohio's biomass industry as a sector that they believed had the potential to grow quickly and would be useful insofar as meeting the state's renewable requirements.

An Ohio State University study published last year concluded that Northwest Ohio has a large amount of harvest available for biomass.

In April 2009, when FirstEnergy announced its plans to retrofit the coal-fired Burger plant to biomass, Ohio Governor Ted Strickland said: "This project will help jump-start the biomass renewable energy industry here in Ohio and also serve as a model for projects throughout the US."

"The Burger project advances Ohio's advanced energy portfolio standard, which requires that 25% of Ohio's energy come from advanced and renewable energy sources by 2025," he said.

As an extra incentive, Ohio law created a provision for power plants to earn extra RECs if they convert generation to "principally biomass energy" by June 30, 2013. In order to qualify, the capacity must also be at least 75 MW, and the owners had to commit to the retrofit by December 31, 2009.

Whereas other renewable facilities would earn a single REC per MW of electricity produced, retrofitted biomass facilities would potentially get even more.

But the only facility to qualify for extra RECs was the Burger power plant, according to Will Reisinger, a staff attorney at the Ohio Environmental Council.

In its ruling on Wednesday, the Ohio PUC said that FirstEnergy would be eligible for the extra RECs only when it is operating with no more than 20% coal and fuel oil, with the remainder co-fired with biomass fuels.

Back in December, FirstEnergy filed its original application with the Ohio PUC seeking certification as a renewable energy facility. But that plan quickly ran into opposition.

Environmentalists objected on the grounds that FirstEnergy had not provided an adequate description of the source of its biomass fuel, while wind energy lobbyists charged that the impact of the Burger plant on the renewable energy business would be "catastrophic."

The American Wind Energy Association zeroed in on the fact that the Burger plant would be allowed to generate extra credits. The size of the multiplier is calculated by dividing the penalty fee utilities pay for non-compliance with the RES by the market value of RECs. FirstEnergy estimated that its REC multiplier could be worth 4.5 times a normal REC, if the market value of a REC is \$10.

Last Wednesday, the commission opened a 90-day comment and reply period for parties to discuss a methodology for determining the market value of RECs, for the purpose of calculating the extra RECs.

In any case, a strong possibility exists that these extra RECs will lead to depressed REC prices, resulting in even more RECs from the Burger plant, according to AWEA. "It is this self-perpetuating cycle of ever-more RECs and ever-lower REC prices which AWEA fears is a 'death spiral' for the Ohio [RES] and could be catastrophic for the renewable energy marketplace," AWEA wrote. — Geoffrey Craig