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Burning Ohio trees at Burger sets fire to debate

Opponents are hot that FirstEnergy will get credits, question if state can produce enough fuel for power plant

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Switching from dirty coal to clean wood at FirstEnergy Corp.'s R.E. Burger Power Plant will require millions of trees — year after year.

Where those trees will come from and new questions about whether the switch helps the environment have triggered objections from Ohio environmental and consumer-advocacy groups.

The dispute has brought Akron-based FirstEnergy's application for renewable energy credits — a financial incentive to make the conversion — to a standstill at the Public Utilities Commission of Ohio.

FirstEnergy said in early 2009 that it intended to switch to biomass fuels, a general term for wood, farm products, manure, landfill and food wastes. The change would help Ohio meet a goal of diversifying its sources of energy and reduce air pollutants.

Work on the \$200 million conversion is under way and will continue into 2012.

While FirstEnergy remains committed, critics are concerned that the Burger plant at Shadyside, in Belmont County in eastern Ohio, could require as many as 10 million trees, or 3 million tons of wood, a year.

Ohio would have to nearly triple its logging to fuel the plant with 3 million tons of trees a year, critics say.

FirstEnergy says the numbers aren't that high.

Either way, the issue of supply is a big one, because other utilities with power plants in Ohio have similar proposals.

American Electric Power, Duke Energy and Dayton Power & Light have plans before the PUCO to burn biomass in various mixes with coal at seven other plants now fired by coal. A private company has plans for an electric-producing biomass plant in Lawrence County.

If those Ohio projects burned only wood, they would require 52 tons of wood per minute — or more than 27.3 million tons of wood annually — to produce only 2,100 megawatts of electricity, critics contend.

One ton of dried wood needs about two tons of fresh-cut wood. That would require harvesting all the large and medium trees from one-seventh of Ohio's public and private forests every year, critics say. Such operations would be neither sustainable nor renewable, critics say.

"That's a lot of trees," said spokesman Will Reisinger, a staff attorney with the Columbus-based Ohio Environmental Council, a statewide eco-group.

Utility behind conversion

FirstEnergy is confident in what it is doing and is committed to complying with Ohio renewable-energy mandates, said Vice President Charles Laskey.

Converting the Burger plant will help FirstEnergy comply with Ohio's advanced energy portfolio, approved in 2008.

Burger would become one of the country's largest biomass-burning facilities, able to produce 312 megawatts, or enough electricity for 190,000 houses.

Under the new Ohio law, 12.5 percent of Ohio's energy must come from advanced and renewable energy by 2025. Sources may include wind, solar and biomass, and half of the total must be generated in-state.

FirstEnergy earns tradable renewable energy credits for producing clean energy, and the legislature gave First-Energy extra credits that other utilities cannot get as an incentive to keep the Burger plant open.

"It's a really good project," said spokeswoman Ellen Raines, adding that the credits are a key element of the proposal.

She said it is too early to predict the value of those credits to the utility and declined to offer any company estimates, but others say the credits will be worth tens of millions of dollars.

When the plan was outlined in April 2009, FirstEnergy said it intended to get its fuel for the aging coal-fired plant mostly within 75 miles in southeastern Ohio and surrounding states.

Renewafuel LLC, a subsidiary of Cleveland-based Cliffs Natural Resources, was supply wood briquettes, but dropped out of the venture.

Since then, FirstEnergy has been tight-lipped about its wood source, saying it "currently intends to utilize biomass obtained from the United States and/or Canada."

FirstEnergy sought bids from potential suppliers in January and got 35 proposals, Laskey said. The company is negotiating with at least six and may have contracts by late August.

At least two of those suppliers intend to provide FirstEnergy with Southern yellow pines from the Deep South, although the exact quantity is not yet final, Laskey said.

Southern yellow pines — there are 10 species — from as far away as Mississippi, South Carolina and the Florida Panhandle could be sources, he said.

The fast-growing pines cover an estimated 30 million acres in the South, according to the U.S. Forest Service. Planted in large tracts, they are the backbone of the region's paper-making and wood-making industries.

Declines in those industries have made large tracts available for Burger, Laskey said. The prices are generally stable and the supply is adequate for decades, he said. Some of the wood might be in pellets and some might be dried and turned into a charcoal-type fuel to reduce moisture and make the wood more burnable, he said. Pellets or briquettes are easier to ship than trees, Laskey said.

The utility could seek to recover its added transportation costs through the PUCO. A majority of the fuel to be burned at Burger will be wood, Laskey said, with the rest being farm wastes and other biomass materials.

Ohio is one of the top five states in the country for biomass from farms, which also could be a major fuel resource, some say.

Burning biomass debate

The debate over burning biomass and the large-scale proposals in Ohio has, according to some, made the state ground zero. Burning biomass may accelerate greenhouse gases and aggravate global warming, according to recent studies.

One study done for the state of Massachusetts and released in June found that biomass-fired electricity would produce 3 percent more carbon dioxide, a key global warming gas, than coal by 2050.

That led Massachusetts officials to announce plans to impose rules that would probably end commercial biomass-burning electric plants in the state.

In mid-July, activists from such groups as the Massachusetts-based Biomass Accountability Project and the Vermont-based Biofuelwatch lobbied in Washington, D.C., against biomass-burning plants.

"It's hard to imagine a more ill-conceived environmental policy," said Richard Wiles of the Environmental Working Group. "Coal-burning utilities and the biomass industry are promoting policies that will jeopardize millions of acres of forests while virtually guaranteeing that CO2 reduction goals from the power energy sector are not realized."

His group called the hoped-for emission reductions from burning biomass instead of coal "illusory."

The Ohio Environmental Council, the Buckeye Forest Council, the Office of Ohio Consumers' Counsel and the Environmental Law & Policy Center all want assurances that there will be environmental benefits from burning trees and that Ohio forests won't be destroyed.

Nationally, opponents are telling Congress that biomass is dirty energy, will foul the air and make people sick and add to global warming. The so-called Anti-Biomass Incineration/Forest Protection Campaign is against proposed federal renewable energy standards that encourage the use of biomass.

The opposing arguments in Ohio have resulted in a stalemate over the FirstEnergy renewable energy credit application before the PUCO.

The groups want to know where FirstEnergy will get its Burger fuel and whether that source will be sustainable before the plant is certified as a renewable energy facility, said Anthony Rodriguez, a spokesman for the Ohio Consumers' Counsel.

It would be premature for the PUCO to approve the energy credits for First-Energy without knowing more about the fuel sources, he said, and First-Energy has provided little information.

The company, in papers filed with the PUCO, said it has complied with all the requirements and that no rule requires disclosure of the fuel source, so it should be granted the credits. The PUCO has suspended the application indefinitely. Opponents want the application to be dismissed.

Cheryl Johncox of the Columbus-based Buckeye Forest Council said the problem is that federal and state incentives promoting renewable energy encourage utilities like FirstEnergy to cut down millions of trees at a time when trees could help curtail global warming by controlling carbon dioxide, a key global warming gas.

21 states burn biomass

Nationally, there are 102 biomass plants that generate electricity in 21 states, according to the Biomass Power Association, a national trade group. Biomass accounts for 1.2 percent of America's electricity.

More than 120 wood-burning biomass power plants have been proposed in the past three years. They would require 46,000 square miles of forests — an area the size of Pennsylvania — to be cleared by 2025, according to one national eco-group.

Most of the operating plants are smaller than Burger and Ohio's other proposed biomass facilities.

Barberton-based Babcock & Wilcox last spring conducted test burns of wood pellets for FirstEnergy in Barberton and at Burger. Those tests went well, Laskey said.

The emissions were "much, much cleaner" and showed substantial improvement, he said. Laskey said the project will be sustainable and renewable — with First-Energy's long-range plan calling for the burned trees or grass to give off no more carbon dioxide than they absorb while growing.

This year, the company will run tests of biomass with coal. While the goal is to burn 100 percent biomass, the plant is allowed to burn up to 20 percent coal under a federal consent decree.

Either way, FirstEnergy has no plans to grow its own fuel.

Laskey said the utility likes the idea of biomass because it can produce electricity when renewable sources such as solar and wind can be thwarted by clouds or still air.

"That's huge," Laskey said.

Biomass as a solution

The utility remains convinced that the changes at Burger might be the solution to many of America's old, small coal-burning power plants, Raines said.

Retrofitting such plants with scrubbers to comply with federal clean-air mandates is very costly. Switching the plants to biomass might prove to be a better solution, especially as concerns grow over carbon dioxide, she said.

The PUCO already has approved a request by FirstEnergy to burn 10 percent biomass along with coke at its Bay Shore plant near Toledo.

Laskey said he had not read the Massachusetts study and could not comment about it. He said he was aware of other studies that support burning biomass as the way to go.

Despite the Massachusetts concerns, biomass is a good alternative and one that Ohio needs to develop, said Cleveland attorney Joe Koncelik of Frantz Ward LLP, author of the Ohio Environmental Law Blog and former head of the Ohio Environmental Protection Agency.

Not everyone shares that optimism.

That new analysis, said Reisinger of the Ohio Environmental Council, is "a big deal . . . and is a potential game changer. Biomass may not be as climate-friendly as everyone thought."

All of Ohio's biomass projects could generate 48 million tons of carbon dioxide annually "at a time when we must be reducing emissions rather than subsidizing their increase," said Johncox of the Ohio forest group.

Ohio's forests are important and helpful in cutting greenhouse gases, she said. "Rate payers shouldn't pay a premium, as they will to subsidize utility companies' burning of tree biomass, unless the alternative energy is truly green and carbon neutral. Burning our forests is neither."

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