

Biomass and Its Implications for Renewable Energy Development

There has never been a greater demand for clean energy than there is today. Ohio and approximately 30 other states have enacted renewable energy standards (“RES”), which mandate that utilities must obtain a percentage of their power sales from “renewable” energy sources. Ohio’s RES, for example, requires all investor-owned electric utilities to provide 12.5 percent of their energy from renewable sources, such as wind, solar, and renewable biomass by 2025.

There is no doubt that Ohio’s RES—passed 132-1 by the Ohio General Assembly in 2008—is a boon to the public interest. The renewable mandate has spurred the construction of a 12 MW solar field in Wyandot County as well as the Turning Point Solar project near Zanesville, which at 50 MW will be one of the largest solar fields in the country, powered by panels manufactured in the Buckeye state. Likewise, the Public Utilities Commission of Ohio (PUCO) has approved applications for dozens of other large-scale wind and solar projects in Ohio.

Increased investment in renewable energy will benefit Ohio’s environment, in the form of cleaner air, and its economy by creating a new demand for parts and labor.

But there’s still a major unanswered question regarding Ohio’s RES: biomass energy. Biomass is included, along with wind, solar, and hydroelectric power, as a renewable energy source under the law. (See Ohio Revised Code Section 4928.01(A) and Ohio Administrative Code Rule 4901:1-40-01). Biomass is attractive to some utilities because it could allow them to continue using existing coal boilers and much of the existing infrastructure at older power plants. But PUCO regulators have still not decided how to handle biomass as a renewable energy source, and this uncertainty threatens the effectiveness of the entire RES.

New studies and data indicate that biomass energy is not necessarily clean, green and carbon neutral in all circumstances. Importantly, the carbon benefits of biomass energy are contingent upon sustainable land use. Biomass energy will only be carbon-neutral if the fuel crops re-grow and sequester carbon-



dioxide—and if this cycle continues ad infinitum. Further, burning crops still produces pollution, such as particulate matter and even mercury. Without proper regulatory oversight, utility-scale biomass projects could result in the deforestation of vast parts of the country.

Moreover, if utilities over-rely on biomass to meet their RES compliance goals, it could defer investment in other job-intensive industries, like solar and wind manufacturing.

Ohio’s largest utility, FirstEnergy Corporation, recently applied to receive renewable energy credit for a massive biomass project at its R.E. Burger power plant in eastern Ohio. After a year spent resisting legal pressure from environmentalists, FirstEnergy cancelled the controversial project in November. But there are still lessons to be learned from the Burger saga. (Full disclosure: the Ohio Environmental Council (“OEC”) argued against the wisdom and legality of this project from the start, first in litigation at the PUCO and finally in an appeal to the Ohio Supreme Court.)

Had the Burger retrofit gone forward, the utility would have reaped a windfall REC profit. In fact, because of the sheer size of the facility (and due to an odd Ohio law that affects how certain biomass RECs are calculated), the number of RECs that would have been produced at Burger would have obviated the need for FirstEnergy to undertake any additional renewable energy project through the year

2025. According to the American Wind Energy Association, the PUCO’s approval of FirstEnergy’s application would have inflicted “catastrophic effects on Ohio’s renewable energy marketplace,” leading to a “‘death spiral’ for Ohio’s [Renewable Energy Standard].” The vast amount of fuel needed would have also had unknown impacts on forests and timber resources.

Even taking Burger out of the equation, however, there are still almost 2000 MW worth of biomass REC applications approved or pending at the PUCO. These remaining biomass proposals should be evaluated through a coherent, sensible set of criteria. Most importantly, the PUCO should require utility applicants to demonstrate that their projects will obtain fuel using sustainable, environmentally benign harvesting practices. The Commission should be careful in allowing another massive biomass project without first considering the full impacts on Ohio’s economy and clean energy industries.

In order to protect Ohio’s environment and its growing renewable energy industry, state regulators and policy makers must ensure that biomass energy questions are considered carefully. Ignoring the potential consequences of the widespread use of biomass fuel would undermine the air quality benefits of Ohio’s RES as well as the state’s fledgling renewable energy economy.

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