



## Companies Look to Biogas as Renewable Fuel Source



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Hog waste is providing farmers and power companies with a new source of renewable natural gas, or what's known as swine biogas. In North Carolina, the electric utility Duke Energy is capturing methane gas from the hog waste at area farms and piping it to a central location where the gas is cleaned and converted to pipeline-quality natural gas to meet a state-required mandate that 0.2 percent of energy come from hog waste by 2023.

The project kicked off late last month. Known as—OptimaKV—it uses a directed biogas approach to create enough renewable natural gas to power the equivalent of 1,000 homes a year.

“Optima KV is just the first of more projects where directed biogas will be used at Duke Energy power plants to create efficient renewable energy,” said David Fountain, Duke Energy’s North Carolina president. “Getting projects to a meaningful scale is important as we advance this innovative technology.”

The Optima KV project follows a model designed in a 2013 study by Duke University’s Nicholas Institute for Environmental Policy Solutions that provided individual and centralized approaches for meeting North Carolina’s Renewable Energy and Energy Efficiency Portfolio Standard mandate for swine gas. The study, which used the similarly named Optima model, found the directed biogas approach could lower the cost of swine biogas to as little as 5 cents a kilowatt hour, or roughly the same price as solar power.

The potential for biogas as a renewable power source is also being explored by Duke University. The campus, which aims to be carbon neutral by 2024, held a forum Tuesday night to explore the alternative energy source.

“What’s so attractive is this dual dividend idea,” said Tanja Vujic, Duke University’s director of biogas strategy, of the university’s plan to displace conventional natural gas—now the primary fuel source for the university’s current steam plants—with methane from hog farms. “You [don’t] just destroy the methane, but [also] make something valuable in its destruction.”

Duke University led a pilot project in 2010 to test the viability of this kind of biogas at Loyd Ray Farms in Yadkinville, NC, and it is now in discussions with potential suppliers to expand biogas production and delivery to the campus.

### **Southern Company Announces Decarbonization Strategy**

At the Bloomberg New Energy Finance Future of Energy Summit, Southern Company CEO Thomas Fanning announced plans for the company to continue to transition away from coal-fired power plants to “low-to-no-carbon” electricity sources by 2050.

“We are transitioning the fleet,” Fanning said. “The dominant solutions will be nuclear ... there will be renewables.”

Although few other details about the company’s decarbonization strategy were shared, Fanning told *EnergyWire* that more particulars about the transition of its fleet will be announced at the company’s next annual meeting.

Concentrated in four Southeastern states, Southern Company is responsible for nearly a quarter of the carbon pollution from southeastern utilities. The announcement makes Southern Company the first large utility in the region to publicly endorse a no-carbon pollution goal.

### **PJM to FERC: Rule on Proposals for Accommodating State Subsidies in Capacity Market**

The PJM Interconnection, which operates the power grid in the U.S. Mid-Atlantic and Midwest region, on Monday asked the Federal Energy Regulatory Commission (FERC) to determine how the wholesale electric capacity market should handle state subsidies for power generators, whether aging nuclear and coal-fired plants or renewables sources such as wind and solar, and to issue an order by June 29.

“Left unaddressed the subsidies will crowd out efficient, competitive resources and shift to consumers the investment and operational risks of generation,” said PJM CEO Andrew Ott. “We seek the appropriate balance that respects state policy while avoiding policy impacts of a state’s subsidies on the market as a whole and on other states.”

The grid operator and some power producers have argued that subsidized generators are entering into the annual PJM capacity market, which allows utilities and other electricity suppliers to purchase power three years in advance, at prices below their actual generation costs, lowering overall market prices and potentially forcing other competitors to shutter their operations.

In a filing to FERC, the PJM asked the agency to decide between two proposals to deal with the issue and to identify which aspects of the proposals need to be revised, rather than send the issue to “trial-type proceedings.” One proposal—capacity repricing—would create a two-stage capacity auction to accommodate state subsidies without distorting market prices. All

generators would participate in the first stage, and payments to subsidized plants that win in that round would be reduced in the second stage. The second proposal, which is preferred by some PJM member companies, involves removing the effect of subsidies from offers into the capacity market by effectively extending the Minimum Offer Price Rule (MOPR). Subsidized bids would be changed to reflect unsubsidized costs, as a result of which some subsidized plants might lose their capacity payment.

One clue about how FERC may view the proposals is offered by its March 2018 decision on Independent System Operator-New England capacity market reform. In that decision, FERC approved a two-part capacity market but designated the MOPR as the “standard solution” for dealing with subsidized resources in the absence of other policies.

***The Climate Post offers a rundown of the week in climate and energy news. It is produced each Thursday by Duke University’s Nicholas Institute for Environmental Policy Solutions.***

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Meet the Author

Tim Profeta is the founding director of the Nicholas Institute for Environmental Policy Solutions. The Nicholas Institute is part of Duke University and focuses on improving environmental policy making worldwide through objective, fact-based research in the areas of climate change, the economics of limiting carbon pollution, oceans governance and coastal management, emerging environmental markets and freshwater concerns at home and abroad. In his role at the Nicholas Institute, Profeta has continued to use his experience on Capitol Hill to engage in climate change debates. His research has focused, specifically, on market-based approaches to environmental regulations—particularly energy and climate change policy. Other projects engage his expertise in environmental law and air pollution regulation under the Clean Air Act.