

**Moral Money Renewable energy**

**Investors smell an opportunity in ripe waste market**

*State laws spur a boom in the conversion of animal dung and rotting food into energy*



A surge in investor interest in deriving energy from organic waste is being driven in part by new state laws

US investors are beginning to smell an opportunity in the waste-to-energy market, where livestock dung and food garbage is traded, with interest being fuelled by new state laws and demand from companies such as UPS.

After a lull in investor interest stretching back a decade, attention to so-called “anaerobic digestion” waste-to-energy is surging in the US, developers in the sector have said.

Renewable fuel options are drawing increasing investor demand amid concerns about climate change and environmental, social and governance (ESG) issues, especially in Europe.

Meanwhile, California is encouraging fuel producers to cut their carbon emissions and big transportation businesses are converting their trucking fleets to renewable natural gas. In May, the logistics company UPS said it would buy 170m gallons of renewable natural gas by 2026, the largest purchasing commitment for RNG to date by any US company, it said.

“2019 is probably the biggest year in the history of digestion as far as I can remember,” said Dana Kirk who manages the Anaerobic Digester Research and Education Center at Michigan State University. He estimated that there are 50 to 100 new projects starting this year.

The last time investor interest in anaerobic digestion jumped was in 2007 and 2008 amid a spike in oil prices, but “the economic performance of those systems did not end up very well”, said Mr Kirk.

“This is the second big rush of investments, but this is a whole different scale now,” in part because of the low carbon intensity of the fuel from anaerobic digestion. “It is in really high demand so you see values of the commodity being at astronomical levels,” he said, pointing to the price of California carbon credits that have hit record highs in the past 12 months.

Newlight Partners, a private-equity fund founded by a group of former Soros Fund Management financiers last year, last week announced a \$106m investment in Bioenergy DevCo, a Maryland-based anaerobic digestion developer. Bioenergy was created earlier this year with additional funding from Sagewind Capital, a New York private equity fund, and individual investors.

Earlier this year, Bioenergy bought BTS Biogas of Italy, which has built more than 200 plants in Europe. The acquisition will help Bioenergy bring developed anaerobic digestion technology to the US to expand operations, the investors said.

More widespread as an energy source in Europe than in the US, anaerobic digestion converts methane gas, which is released as organic matter decomposes, into natural gas. In the US, there are only about 248 anaerobic digester projects operating on livestock farms, according to government estimates.

But with California’s low-carbon fuel standard of 2009, which encourages low-carbon fuel use, and with other states passing similar laws, “there is a financial motivation now for folks to invest in anaerobic digester to renewable natural gas systems,” said Curt Gooch at Cornell University, who works with New York State and dairy businesses to develop waste-to-energy projects.

Current high prices for California’s low-carbon fuel standard credits “should help spur biogas production,” analysts at Bank of America said in an August 9 research report.

On the US east coast, where Bioenergy will initially be developing facilities in Maryland, New Jersey and New York, all three states that this year passed laws mandating certain food waste recycling. In March, Governor Andrew Cuomo announced the first big anaerobic digester in the New York City metropolitan area will be operational in 2020.

The state efforts are prompting the need for food waste disposal options like anaerobic digestion, said Shawn Kreloff, founder and chief executive of Bioenergy.

“That mixture of events has made it much more interesting here now to bring the technology to the US,” he said. “One of the biggest issues here in the US is a lot of the plants the small actors have built have not worked very well. The technology is needed and wanted throughout most of the US.”

*Patrick Temple-West in New York*

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