



Storms WTE

About Storms & "Mixed Wastes" **Bladenboro, North Carolina**

In the fall of 2013, Storms Hog Power put a DVO digester to work — transforming their facility into the largest waste-to-energy operation in North Carolina. The Digester is 16 feet deep and about half the length of a football field. Each day, the digester processes approximately 60,000 gallons of swine waste mixed together with various organics brought to the site via truck.

Project at a Glance

- Largest operating swine waste-to-energy system in North Carolina.
- Received the 2015 American Council of Engineering Companies National Recognition Award.
- Proven DVO, Inc. *Two-Stage Linear Vortex™* anaerobic digester (AD) technology installed and fully commissioned in Fall 2013.
- Farm can now produce 925 kW of electricity, inorganic fertilizer and other useful byproducts.

Details

- Farm has approximately 28,000 hogs.
- The digester can hold about 1.2 million gallons
- Follow-on treatment recovers 90% of the farm's phosphorus, along with significant nitrogen and micro-nutrients necessary for healthy crops.

DVO, Inc.
Chilton, Wisconsin

Our Unique Technology

In anaerobic digestion (AD), naturally occurring microorganisms transform waste into valuable products in a controlled, oxygen-free environment.

Traditional AD technologies featuring above-ground tanks are inefficient and costly to operate. DVO's patented *Two-Stage Linear Vortex™* technology solves these issues by successfully integrating and refining two conventional technologies (mixed and plug flow).

DVO's system continually mixes a wide range of waste solids using a first-in, first-out design, guaranteeing retention time and maximizing waste digestion.

The result? A revolutionary solution for optimal digestion efficiency and unparalleled reliability.



SMARTER. MORE EFFICIENT. REVOLUTIONARY.



Before and After a DVO digester:

Before any digester

- Conventional electricity is purchased from the utility at market rates.
- Farm used open-air ponds for waste settling. Methane gas from wastes contributes to greenhouse gases at rates 21 times more powerful than carbon dioxide.
- Pathogens such as e-coli and salmonella can be concerns from the use of raw, unprocessed farm wastes.
- Nuisance odor issues can result from manure storage and application.

After a DVO digester

- Renewable electricity is self-generated and sold back to the utility.
- Methane is consumed by the digester, reducing greenhouse gas emissions from farm wastes by 94%.
- Pathogens in the digested waste are greatly reduced, often to the point of non-detection.
- Up to 97% odor reduction is achieved, as odor is burned away in the biogas engines.

Additional Nutrient Recovery – Only from DVO

DVO's nutrient recovery technologies mark a major advancement in the industry. Only DVO provides practical processing options that can remove up to 90% of phosphorus and up to 70% of ammonia from hog waste.

These recovery options provide farmers greater nutrient management flexibility and ease in complying with environmental regulations.

Other Benefits of DVO Digesters

- **Proven Bankability:** DVO digesters operate profitably. The company has the largest number of successful installations operating in the U.S.
- **Scalability:** DVO configures its digesters for each site and each type of waste stream, including food wastes. The design makes sense for both large and small waste stream volumes, with no upper limits.



About DVO

Since 2001, DVO Inc. has been solving manure and food waste management challenges, transforming organic waste streams into power and other useful byproducts at the highest levels of efficiency and reliability in the anaerobic digester industry.

DVO is the undisputed U.S. market leader. Nearly 120 of its patented Two-Stage Mixed Plug Flow™ anaerobic digester systems are installed at more than 70 farms in 17 states, with total electrical generation capacity of more than 75 megawatts. DVO digesters are also running in Serbia, Canada and Chile.

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