



Municipalities: Turn Your Digester Gas Flow into a Cash Flow!

Spencer can help you do well by doing good as you raise cash and cut pollution at the same time!

As *The Wall Street Journal* reported (July 04) "The administration is (going to) increase efforts to capture methane gas emissions...as a fuel and to reduce pollution contributing to global warming. Major sources of man-made methane include...municipal landfills where decaying garbage produces the gas, livestock production and anaerobic digester gas (ADG) produced at wastewater treatment plants. Methane removal techniques have the potential to pay for themselves when the product is used on-site or marketed as a fuel."



Technically called "biogas," it also goes under the aliases of sludge gas, sewage gas and digester gas. It's a smelly, noxious byproduct of biological decomposition, typically 65–70% methane and 25–30% carbon dioxide, plus particulates, moisture, oils and a little hydrogen and nitrogen. This mixture is a potent pollutant, for sure, but it's also a powerful, inexpensive energy source.

Before you can use digester gas for boiler combustion or internal combustion engines, though, you have to have a stable

supply at a boosted pressure. That's where Spencer comes in. Our digester gas boosters are so effective, we often see engineering specifications like this: "Sludge gas booster blowers shall be The Spencer Turbine Company, Model GH, or equal. Engineer knows of no equal."

To deal with this explosive, flammable and corrosive gas, the gas booster is made of stainless steel with anodized aluminum fans and Inconel electrical connectors. Spencer's completely hermetic design, which incorporates an internal explosion-proof motor, has zero leakage to the environment.

Spencer has a couple of methods to deal with the often uneven flow of incoming gas or the variable gas requirements of the system. One technique incorporates bypass piping to keep gas flowing through the gas booster for motor cooling. The other approach is called a

natural gas dilution system, which uses digester gas as a primary engine fuel, but supplements the gas flow with natural gas whenever needed.

Spencer supplies its digester gas boosters as a package deal—a complete turnkey module, skid-mounted and ready for piping and electrical hookups. Each package has its own control panel, hermetically sealed gas booster, isolation valves and other customized components such as a gas aftercooler/intercooler and stainless steel piping.

It's a total win for all involved. Municipalities turn a pollutant into a usable or salable commodity and we all breathe cleaner air.



The Spencer Turbine Company

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