



DIGESTER RENOVATION WITH ALTERNATE POWER SOURCE

West Lafayette, Indiana

As concerns for energy efficiency and “going green” become more prevalent, cities nationwide are implementing alternative power projects. The City of West Lafayette was ahead of the trend with its Digester Renovations with Alternate Power Sources project. Wessler Engineering helped the City utilize the CWSRF financing to establish a Fats, Oils, and Grease (FOG) program and a Cogeneration Facility at the West Lafayette Wastewater Treatment Plant (WWTP).

The WWTP will receive FOG to generate a 30% increase in methane gas production. The methane gas will be used to generate electricity and provide environmental as well as economic benefits.

The City anticipates reduced greenhouse emissions and energy savings of over \$7.2 Million over the next 20 years. Approximately 33% of the plant’s power needs will be supplied by methane-generated electricity via the use of micro-turbine generation. West Lafayette’s Director of Utilities further enhanced the City’s dedication to “go green” by adding electric vehicle charging stations adjacent to the digesters. Now, electricity generated from the micro-turbines will also provide power to the City’s electric vehicle fleet.



Direct FOG injection will also generate tipping fees—a new revenue source. Commercial custom-

ers will haul waste grease to the WWTP for disposal, rather than out of town, reducing trucking volume and saving customers hauling costs. This will generate millions of dollars for the utility. Formerly undervalued and overlooked, this process is becoming more common in the United States.

Our ingenuity and foresight expanded West Lafayette’s treatment options. The project earned the City the US EPA’s Performance and Innovation in the SRF Creating Environmental Success (PISCES) award.



The City of West Lafayette was recognized by the EPA in 2009 for reducing the carbon footprint by generating green power on-site.

For help with your next project or information regarding renewable energy solutions, please contact Gary Ruston at GaryR@wesslerengineering.com or visit us on-line.



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