

KISHWAUKEE WATER RECLAMATION DISTRICT IS GOING BEYOND ENERGY EFFICIENCY

# NET-ZERO ENERGY PLAN ENERGY PRODUCING



**Kishwaukee Water  
Reclamation District**



**2 x Gas engine  
MAN E3268LE212**



**375 kW Electricity  
462 kW Heating**



**2020 / 2020**

# The Net-Zero Energy Plan

"The Kishwaukee Water Reclamation District (KWRD) aims to be energy neutral by 2025.

The first phase of this plan was to install two CHP (Combined Heat and Power) generators to power our facility. These generators are fueled by biogas that is a natural byproduct of the wastewater treatment process. Anaerobic bacteria in our digesters break down biological solids and turn them into water and methane. This methane is captured and used to power the generators".

## Ahead of schedule

"In February, the KWRD turned on a second Combined Heat and Power (CHP) generator at the wastewater treatment facility in DeKalb. After a year of planning, the new generator joined one that has been running since 2020.

The two generators, powered with gas produced by the treatment process, provide 125% of the facility's electrical energy needs.

The sewage treatment process creates biogas, which most facilities burn off.

In 2020, the KWRD began using this gas to power its first CHP generator. The generator reduced the facility's power consumption by 60%, but it couldn't meet the entire need. To produce enough gas for a second generator, the facility began processing food waste and restaurant grease.

The hauled waste program keeps these materials out of landfills and gives the KWRD the gas volume it needs to power a second generator.

The district originally planned to make use of the extra gas by 2025. Two years ago, while meeting with Facebook officials about the wastewater needs of Facebook's DeKalb data center, KWRD officials mentioned their goal to become energy neutral. Facebook offered a half-million-dollar donation that, combined with a grant from the Illinois Clean Energy Community Foundation, brought the second generator online years ahead of schedule".

*Source: Kishwaukee Water Reclamation District*

