

# Energy Developments

Oberlin, Ohio

ALTERNATIVE FUELS

## *Lorain County Landfill*

Municipal solid waste contains significant portions of organic materials that produce a variety of gaseous products when dumped, compacted, and covered in landfills. Anaerobic bacteria thrives in the oxygen-free environment, resulting in the decomposition of the organic materials and the production of gases, primarily carbon dioxide and methane. In the case of the Lorain County Landfill, the gas was refined and converted into a renewable energy source. The energy source was then recycled into the energy grid to create energy and provide a cost savings for the landfill. More importantly the refining of these gases reduce the amount of carbon dioxide and methane released into the atmosphere and also help gasification processes run more efficiently and for a longer period of time.



## *Project Scope*

IPS was selected by EDI to perform the engineering, procurement and construction for the power station expansion project at EDI's Lorain County Landfill. The expansion will add an additional 12.8 MW to the system, giving it a total capacity of 23.7 MW. The power station will also receive an additional 4,800 SCFM of landfill gas. Eight CAT 3520 engines and one Parker GES1200 duplex siloxane removal skids were installed to the existing unit. Gas conditioning equipment included blowers, coolers and heat exchangers and thermal oxidizer off gas flare. Complete build out scope included site work, concrete foundations, equipment setting, masonry, carpentry, mechanical, piping, electrical, and control work.

*Project Duration:* 14 months

*Project Cost:* \$19,000,000



# IPS