

C2E – Mining Energy from Wastewater

The Opportunity:

Wastewater is commonly considered a problem, a liability, and you wish it would just go away, but it is always there, the result of manufacturing. We don't see your wastewater that way; we see it as a potential source of clean, renewable energy, a resource, not a liability.

What is C2E?

C2E combines traditional anaerobic digestion with state-of-the-art technologies to convert your wastewater into an energy source, thus reducing the amount of waste generated, which directly reduces your costs for doing business. In addition, the energy produced by this program can be used on site, reducing your energy costs, and increasing your profits.

How it Works:

Our program provides systems that convert the carbon and hydrogen in your wastewater into biosolids and methane gas. Both of these components can be converted into electricity or reused, which reduces waste disposal and energy costs. In addition, this approach cleans most streams to a level that will meet pre-treatment and in some cases direct discharge requirements.

Uses of Methane

The methane gas collected through anaerobic digestion of the wastewater can be converted to energy in three ways. The simplest is direct burning, as a substitute for or supplement to natural gas that would normally be used on site. Methane can also be converted into electrical energy. The electricity can be returned to your facility to offset the electricity purchased from the grid. Finally, the gas can be stripped and converted into hydrogen gas, thus becoming a source for hydrogen fuel. All three provide good, reliable, renewable energy sources, and reduce

the amount of waste generated, thus saving money and reducing impact on the environment.

Uses of the Solids

The solids collected from the digester are conditioned solids in the form of stabilized compost material. These can be distributed as a lawn care product, "Organo-Lawn", or used on site to enhance the soil. Alternately, the solids can be further processed into methane gas. The remaining solids are in the form of inert ash, which can be mixed into concrete and used for road surfacing.

Service Options

Sali Group can provide you with design, design/build, or finance/design/build/operate options and will work with you to determine which processes are right for your facility, whether it be the installation of more traditional technologies or state-of-the-art fluidized beds and fuel cells. Further, Sali Group can work with your supplier to ensure that you get the best rate for kilowatt hour.

Experience

Sali Group Programs are led by individuals with over 15 years experience in the engineering, regulatory and related fields. We have combined these resources into one group that focuses on complete Engineering Department Services.

Other Programs

Sali Group is a full service engineering company that partners with industry for long-term programs, such as CFEP or individual projects as required. Other services include:

- Potable/Process water audits
- Target Zero SM
- Construction Management
- Traditional Engineering/Value Engineering