



## The United Sludge-Free Alliance

# Turning Sludge to Energy in the United States

Renton, WA uses Fuel Cell technology to turn sludge into electricity.

Flint, MI has teamed up with Swedish Biogas to build a biogas plant that will turn sludge into fuel for municipal vehicles.

Allentown, PA is the proposed site of a bio-waste to energy facility that would use sludge to power its own operation.

Rialto, CA's uses EnerTech's SlurryCarb technology to turn sludge into pellets called E-fuel that are burned as a carbon-neutral replacement for coal by area cement companies.

Mesa, AZ claims to be saving \$90,000 a year by capturing methane from sludge and using it to heat and power homes.

Sanford, FL's Gasification Facility converts sludge to heat safely and economically.



“Poop to Power” projects are popping up all over the country as we increasingly recognize that waste is the ultimate renewable resource. The puns abound, like Waste Wattage and Dung Deal, but converting sewage sludge to energy is serious business. Some particularly innovative projects involve turning zoo waste into power in Denver, Cincinnati, and other cities. San Francisco collects dog poo from pet daycare centers and combines it with food waste it collects from restaurants to create energy. And don’t be misled by the empty space in the middle of the map on the reverse side. Many states have projects underway to convert farm waste to energy. When it comes to converting sewage sludge from wastewater treatment facilities into energy, however, here are just some of the ways it’s being done across the United States.

#### **Renton, WA**

Sludge is sent from a digester into a fuel cell system where methane is broken down into hydrogen and carbon dioxide. The carbon dioxide is recirculated to turn it into carbonate. It’s then combined with the hydrogen to generate electricity, water, carbon dioxide, and heat. The energy produced powers the treatment plant.

<http://www.msnbc.msn.com/id/5335635/>

#### **Rialto, CA**

Atlanta’s EnerTech Environmental uses SlurryCarb technology to turn sludge into E-fuel, a pelletized version of the stuff that is interchangeable with coal. SlurryCarb is a pyrolytic process that uses heat and pressure to create the pellets.

[http://www.powermag.com/renewables/waste\\_to\\_energy/Turning-Sewage-into-Renewable-Energy\\_2083.html](http://www.powermag.com/renewables/waste_to_energy/Turning-Sewage-into-Renewable-Energy_2083.html)

#### **Mesa, AZ**

Mesa claims their methane to energy program saves the Northwest Wastewater Treatment Plant \$90,000 per year and generates enough energy to power hundreds of homes, while keeping sludge out of landfills.

[http://www.abc15.com/content/news/southeastvalley/mesa/story/From-poop-to-power-How-1-Valley-city-makes/6S5kJ05Yjk-wbOgZ\\_jsROg.csp](http://www.abc15.com/content/news/southeastvalley/mesa/story/From-poop-to-power-How-1-Valley-city-makes/6S5kJ05Yjk-wbOgZ_jsROg.csp)

#### **Flint, MI**

In July 2009, Swedish Biogas International signed an agreement with Flint’s Mayor Mike Brown to start construction on a biogas plant that will turn sludge into fuel for the city’s municipal vehicles. Linköping, Sweden, the company’s home, uses the technology to make government-subsidized auto fuel, heat homes, and generate electricity.

<http://abclocal.go.com/wjrt/story?section=news/local&id=6907187>

#### **Allentown, PA**

Mayor Ed Pawlowski is seeking federal funding to build facilities to turn sewage sludge into biofuel. In addition to helping make the city a hub of green technology, the waste-to-energy program would save the city hundreds of thousands of dollars each year in utility and hauling costs.

<http://www.allbusiness.com/energy-utilities/utilities-industry-water/12659588-1.html>

#### **Sanford, FL**

Sanford has a 20-year contract with MaxWest Environmental Systems to operate the new gasification plant that will turn sludge into a green alternative to the natural gas that powers the city’s sludge dryer, and, eventually, a source of electricity. The scalable operation can handle waste from other cities and private haulers, as well as handling its own city’s sludge.

<http://www.distributedenergy.com/forms/print-29196.aspx>