WHY BIOGAS?

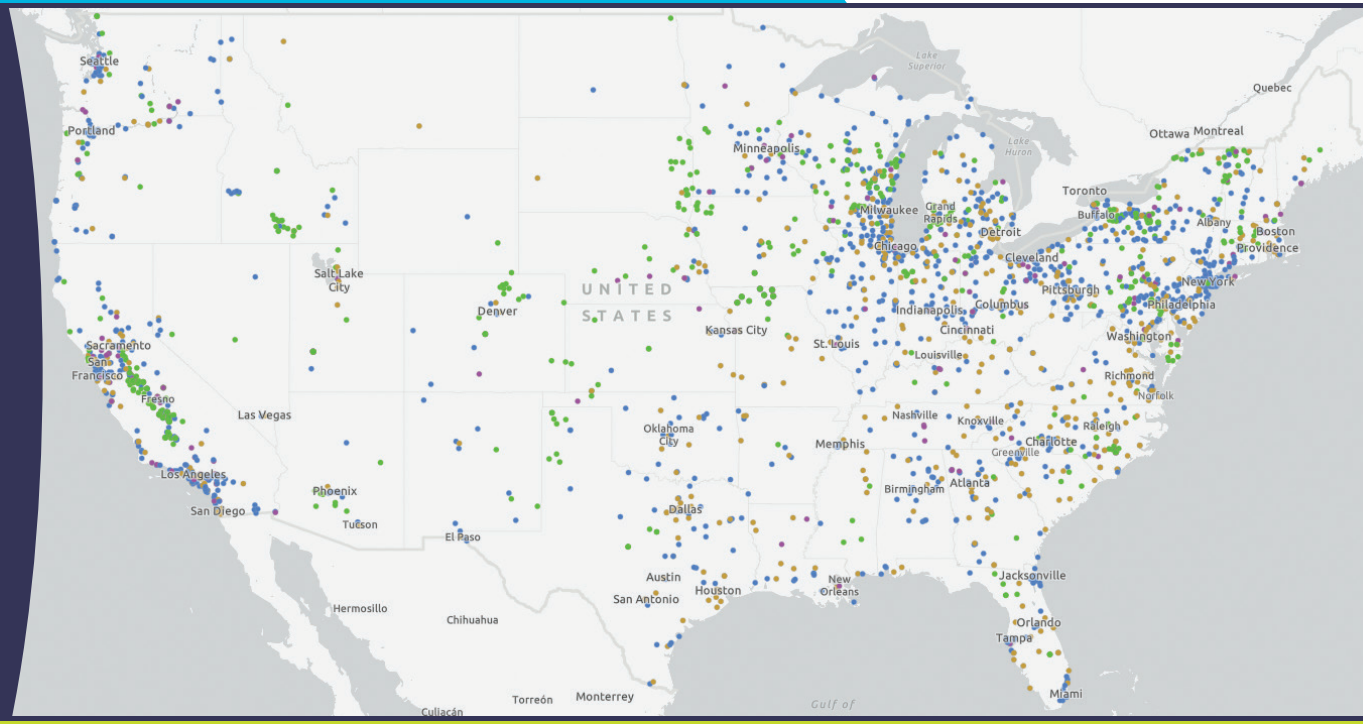
Biogas systems protect our air, water and soil while recycling organic material to produce renewable energy and soil products. In cities, biogas systems recycle food scraps and wastewater sludge, reducing municipal costs and improving air emissions. In rural areas, biogas systems make agriculture more sustainable and create additional revenue streams for farmers. In all cases, since biogas systems prevent greenhouse gases, like methane, from entering the atmosphere, all biogas systems make our air cleaner to breathe and combat climate change, displacing fossil fuels. At the same time, biogas systems produce soil products that recycle nutrients, contributing to healthier soils and creating opportunities to eliminate nutrient runoff that pollutes our waterways. Waste management, renewable energy and fuels, clean air, healthy soils and crystal clear waterways—you can get all of this when you build a new biogas system.

AMERICAN BIOGAS COUNCIL

1126 I Street SE Washington, DC 20003
202-640-6595
team@americanbiogascouncil.org

Operational U.S. Biogas Systems

The U.S. has approximately 2,500 sites, producing biogas in all 50 states, including over 600 anaerobic digesters on farms, 1,200 water resource recovery facilities using an anaerobic digester, more than 110 stand-alone systems that digest food waste, and 580 landfill gas projects. For comparison, Germany has nearly 10,000 operating digesters and some communities are essentially fossil fuel free because of them.



Potential for U.S. Biogas Systems

The potential for growth of the U.S. biogas industry is huge.

We count more than 17,000 new sites ripe for development today: 11,200 livestock farms; 3,750 water resource recovery facilities; 1,370 food scrap-only systems; and 730 landfills with gas collection opportunities. **If fully realized, these new biogas systems could produce 194 billion kilowatt hours of electricity each year and reduce the emissions equivalent of removing 3 million passenger vehicles from the road. These new biogas systems would also catalyze an estimated $450 billion in capital deployment for construction activity which would result in approximately 900,000 short-term construction jobs to build the new systems and 45,000 permanent jobs to operate them.** Indirect impacts along supply chains would be even greater.

For individual state profiles, visit: https://americanbiogascouncil.org/resources/state-profiles/

American Biogas Council, EPA LMOP 2020, Water Environment Federation "Enabling the Future," EPA AgSTAR 2023, EPA "Anaerobic Digestion Facilities Processing Food Waste in the United States" January 2021.

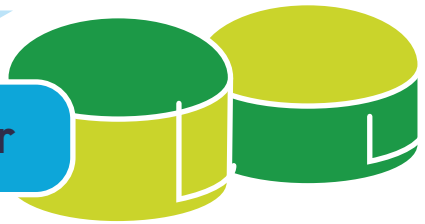
www.americanbiogascouncil.org

How Biogas Systems Work

1 Organic Material

Microorganisms break down the organic material over time.

2a Landfill



2b Digester

Digested material may be returned for livestock, agricultural and gardening uses

Some biogas can be used to heat the digester

3a Biogas

3b Digested Material

Step 1
ORGANIC MATERIAL
Organic materials are the "input" or "feedstock" for a biogas system. Some organic materials will digest more readily than others.

Step 2a
LANDFILL
As material is deposited in the landfill and covered, anaerobic microbes consume organic material and burb out biogas, which is vacuumed out through buried, perforated pipes.

Step 2b
DIGESTER
Add organic material to these engineered tanks, which are usually stirred and heated to about 100° F, and the same anaerobic microbes produce biogas, which is captured in the digester's air-tight, flexible roof.

Step 3a
BIOGAS
Biogas consists mostly of methane and carbon dioxide, plus water vapor, and other trace compounds (e.g., siloxanes)

Step 3b
DIGESTED MATERIAL (DIGESTATE)
In addition to biogas, digesters produce solid and liquid digestate, containing valuable nutrients (nitrogen, phosphorus & potassium) and organic carbon.

RENEWABLE NATURAL GAS
Biogas processed to gas pipeline quality is often called biomethane, renewable natural gas, or RNG.