

Dirty Biogas Has No Place in the United States' Clean Energy Future

The United States is promoting so-called biogas (sometimes called biomethane or renewable natural gas) as renewable energy. Biogas includes waste methane from landfills, sewage treatment plants and livestock manure. But the prefix “bio” does not make biogas clean — it is composed of the same greenhouse gas methane that is found in fracked gas.¹ The natural gas and fracking industries push biogas to greenwash their dirty energy production. It has no place in the country's clean energy future.

Federal and state governments are championing this dirty energy. The U.S. Department of Agriculture, U.S. Environmental Protection Agency and U.S. Department of Energy have endorsed biogas to reduce total methane emissions and identified 11,000 additional potential biogas facilities.² And state renewable energy targets designed to encourage the expansion of renewable energy all include some form of biogas — from animal waste, manure digesters, landfills or municipal waste — in their definition of renewable energy.³

Biogas greenwashes the fracking and natural gas industries that want to distract from fracking's climate, water and air pollution. Endorsing biogas encourages the buildout of even more leaky gas infrastructure that poses significant risks to communities and the climate.

Biogas is dirty energy

Burning biogas releases greenhouse gases like carbon dioxide and other pollutants, including smog-forming nitrogen oxides, ammonia and hydrogen sulfide.⁴ In 2018, there were over 850 manure digesters and landfill plants producing electricity in the United States.

A Michigan digester that processed food waste to feed electricity into a municipal utility was permanently shut down in 2018 after complaints of foul smells.⁵ In October of that year, a Nebraska biogas facility riddled with environmental violations had its sixteenth lawsuit filed against it.⁶ Yet natural gas companies, such as SoCalGas and Pacific Gas and Electric Company, have promoted biogas as “renewable natural gas.”⁷ In 2018, Dominion Energy announced a joint venture with Smithfield Foods, the world's largest hog producer, to use methane from hog manure in Dominion's gas infrastructure.⁸



Factory farm manure digesters: In 2018, there were 253 operating factory farm digesters across the United States using the manure from 1.1 million hogs, 1.4 million chickens and over 500,000 cows to power the electricity grid.⁹ Manure digesters have received government subsidies, but methane combustion emissions, methane leaks, accidental manure spills and explosions mean that digesters provide neither clean nor safe energy.¹⁰

Between 2011 and 2014, a state-subsidized livestock biodigester in Wisconsin experienced an explosion of methane

gas and pipeline breaks that caused three different manure spills, spewing more than 400,000 gallons of manure onto land and into waterways.¹¹ Digester subsidies and on-farm power generation create incentives to expand the unsustainable, environmentally destructive and socially unjust factory farm food production system.

Landfill gas: There are over 600 landfill digesters in the United States, some with histories of water contamination, methane leaks and nitrogen oxide emissions.¹² In 2011, a San Jose, California landfill digester faced an \$882,200 fine for a chemical spill the previous year that contaminated a nearby creek with toxic pollutants.¹³ Despite drastic environmental impacts, landfill gas delivered a mere 0.3 percent of total U.S. electricity generation in 2016.¹⁴

Digesters are expensive, inefficient and polluting, and they primarily generate power for the facilities themselves. Approximately two-thirds of the energy from sewage gas digesters and half of the energy from manure digesters may be needed to power the digesters themselves.¹⁵ The world's largest sewage power facility — in Washington, D.C. — powers the digester but supplies only one-third of the complex's energy needs.¹⁶

Biogas has no place in a clean energy future

The natural gas industry pushes the “renewable natural gas” narrative to justify the expansion of fossil fuel infrastructure and to greenwash fracking. Proponents say that the supposedly clean biogas could be pumped into the existing natural gas pipeline network, further entrenching natural gas infrastructure.¹⁷ Methane from fracked gas or biogas is a potent greenhouse gas, nearly 90 times more powerful than carbon dioxide.¹⁸ Gas pipelines, storage facilities and other infrastructure leak tremendous volumes of methane that contribute to climate change. SoCalGas' Aliso Canyon gas storage facility was the site of the worst methane leak in history, which displaced 8,000 families.¹⁹

The fracking and natural gas industries are promoting biogas to greenwash their climate-destroying industry. Dirty biogas releases greenhouse gases and other air pollutants but generates little reliable power. Investing in natural gas infrastructure prolongs fossil fuel dependence, delays the shift to clean renewable energy and forestalls meaningful reductions in greenhouse gas emissions. It is time to invest in a just transition to a 100 percent, zero-emission, clean energy future.

Endnotes

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