



**AMERICAN
BIOGAS
COUNCIL**

Biogas State Profile: Missouri

Biogas Potential

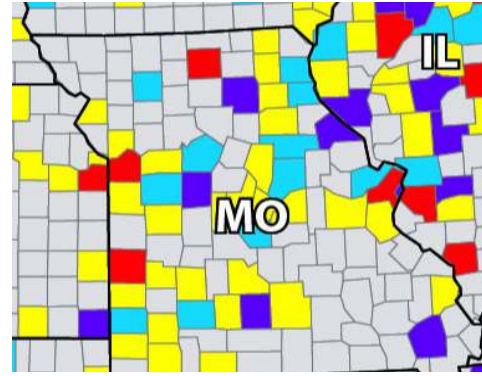
Missouri ranks #11 among U.S. states for methane production potential from biogas sources.¹

Currently in Missouri has 37 operational biogas systems. We see the potential for more than 230 new projects to be developed based on the estimated amount of available organic material.

Constructing this many projects would generate \$690 million in capital investment, and create 5,750 short-term construction jobs, 460 long-term jobs, and numerous industry-supporting jobs.

If fully realized, these biogas systems could produce enough electricity to power 186,036 homes (2.1 billion kWh) or enough renewable natural gas to fuel 304,854 vehicles.

They would also collectively reduce greenhouse gas emissions by the equivalent of 9.1 Trillion tons of carbon dioxide, the same as growing 39.3 million tree seedlings for ten years or the amount 1,310,835 acres of U.S. American forest sequester each year.²

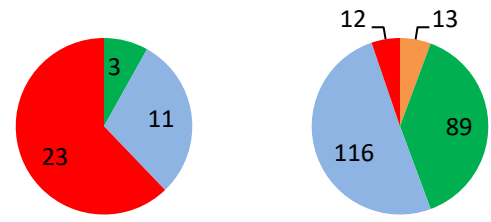


This analysis illustrates the methane generation potential by county from the following biogas sources: landfills; animal manure; wastewater treatment; and industrial, institutional, and commercial organic waste (IIC).
 Thousand Tonnes/Year
 > 10
 5 to 10
 2.5 to 5
 1 to 2.5
 < 1

U.S. Energy Rankings

Energy	
Total CO2 Emissions ¹²	Ranks 13 th in U.S., 2.4% share
Per Capita Energy Consumption ¹³	Ranks 25 th in U.S.
Renewable Electricity Generation ¹⁴	Ranks 36 th in U.S.
Energy Prices Rank ¹⁵	Ranks 40 th in U.S.

Operational Systems Potential Systems



Food Waste Agriculture Waste Water Landfill

Biogas Systems

Food Waste

Operational food waste biogas systems ³	-
Potential food waste biogas systems ⁴	13

Agriculture

Operational biogas systems on farms ⁵	3
Potential dairy farm biogas systems ⁶	6
Potential swine farm biogas systems ⁷	83

Waste Water

Operational biogas systems at water resource recovery facilities ⁸	11
Potential biogas systems at WRRFS ⁹	116

Landfills

Operational landfill gas systems ¹⁰	23
Potential landfill gas systems ¹¹	12

Feedstocks

Manure

Total Manure Volume ¹⁶	73.9 million gallons per day
Total Dairy Manure ¹⁷	1.6 million gallons per day
Total Swine Manure ¹⁸	4.1 million gallons per day
Total Broiler Manure ¹⁹	43.2 million gallons per day
Total Turkey Manure ²⁰	4.2 million gallons per day
Total Beef Manure ²¹	20.6 million gallons per day

Food Waste

Total Food Waste Generated ²²	667,040 tons per year
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Waste Water

* All citations are available on AmericanBiogasCouncil.org.

Average flow from WRRF's ²³	17.1 million gallons per day
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Missouri Green Policies

State RPS ²⁴	15% by 2021
Statutes & Regulations	Interconnections Guidelines Energy Efficiency Goals Net metering
Sustainability Commitments	City Of Columbia- Renewable Portfolio Standard Missouri State University University of Missouri Sustainable Cities Institute The City of St. Louis

Biogas Companies Located in MO

[Stern Brothers & Co](#)
[Evonik Industries](#)
 + Dozens More

[Visit www.AmericanBiogasCouncil.org](http://www.AmericanBiogasCouncil.org) for
[the full Biogas Industry Directory](#)

Missouri Biogas Resources:

[Roeslein Alternative Energy, LLC](#)

Roeslein Alternative Energy creates Renewable Natural Gas (RNG) – Pipeline-quality natural gas produced from organic inputs and natural processes.

[Hampton Alternative Energy Products LLC.](#)

The Hampton Feed Lot developed the Induced Blanket Reactor Anaerobic Digester. It is a high rate anaerobic digester. Above ground tanks with associated pumps, valves, piping, gas collection system, and controls, sometimes placed in a well insulated building.

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- 1 <http://www.nrel.gov/docs/fy14osti/60178.pdf>
 - 2 (See ABC Biogas Potential Calculator)
 - 3 (See ABC Food Waste Digester Excel Spreadsheet)
 - 4 (See ABC Biogas Potential Calculator)
 - 5 <http://epa.gov/agstar/projects/index.html>
 - 6 http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Missouri/st29_1_017_019.pdf (Farms with 500 to 999 milk cows)
 - 7 http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Missouri/st29_1_020_023.pdf (Farms with 5,000 or more hogs)
 - 8 <http://resourcerecoverydata.org/>
 - 9 (See Above)
 - 10 <http://www.epa.gov/lmop/projects-candidates/operational.html>
 - 11 <http://www.epa.gov/lmop/projects-candidates/candidates.html>
 - 12 <http://www.eia.gov/state/rankings/?sid=CA#series/226>
 - 13 <http://www.eia.gov/state/?sid=CA#tabs-5>
 - 14 (See Above)
 - 15 <http://www.eia.gov/state/rankings/#/series/31>
 - 16 (See EQIP State Matrix Livestock Inventory)
 - 17 (See Above)
 - 18 (See Above)
 - 19 (See Above)
 - 20 (See Above)
 - 21 (See Above)
 - 22 (see ABC Biogas Potential Calculator)
 - 23 <http://resourcerecoverydata.org/>
 - 24 <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx#mo>

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