



**AMERICAN
BIOGAS
COUNCIL**

Biogas State Profile: Oregon

Biogas Potential

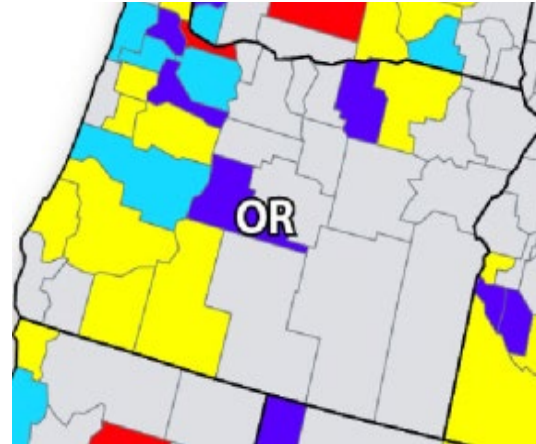
Oregon ranks #33 among U.S. states for methane production potential from biogas sources.¹

Currently Oregon has 53 operational biogas systems. We see the potential for more than 67 new projects to be developed based on the estimated amount of available organic material.

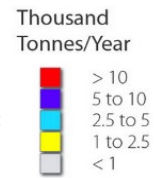
Constructing this many projects would generate \$201 million in capital investment, and create 1,675 short-term construction jobs, 134 long-term jobs, and numerous industry-supporting jobs.

If fully realized, these biogas systems could produce enough electricity to power 13,553 homes (233 million kWh) or enough renewable natural gas to fuel 33,825 vehicles.

They would also collectively reduce greenhouse gas emissions by the equivalent of 4.6 trillion tons of carbon dioxide, the same as growing 4.1 million tree seedlings for ten years or the amount 139,803 acres of U.S. American forest sequester each year.²



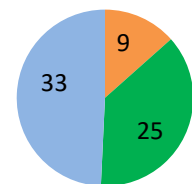
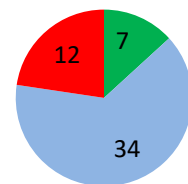
This analysis illustrates the methane generation potential by county from the following biogas sources: landfill; animal manure; wastewater treatment; and industrial, institutional, and commercial organic waste (IIC).



U.S. Energy Rankings

Energy	
Total CO2 Emissions ¹²	Ranks 39 th in U.S., .69% share
Per Capita Energy Consumption ¹³	Ranks 38 th in U.S.
Renewable Electricity Generation ¹⁴	Ranks 3 rd 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	9

Agriculture

Operational biogas systems on farms ⁵	7
Potential dairy farm biogas systems ⁶	25
Potential swine farm biogas systems ⁷	-

Waste Water

Operational biogas systems at water resource recovery facilities ⁸	34
Potential biogas systems at WRRFS ⁹	33

Landfills

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

Feedstocks

Manure

Total Manure Volume ¹⁶	8 million gallons per day
Total Dairy Manure ¹⁷	2.2 million gallons per day
Total Swine Manure ¹⁸	13,500 gallons per day
Total Beef Manure ¹⁹	5.8 million gallons per day

Food Waste

Total Food Waste Generated ²⁰	448,200 tons per year
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Waste Water

* All citations are available on AmericanBiogasCouncil.org.

Average flow from WRRF's²¹ 8.8 million gallons per day

Oregon Green Policies

Management of Solid Waste: Senate Bill 263 Updates statewide goals for recovery of materials from general solid waste stream for calendar years 2020 and 2025 and subsequent years. Reduces required frequency of statewide solid waste composition study to once every three biennia. Requires Department of Environmental Quality to conduct statewide surveys of recovery rates for food and plastic waste for calendar year 2020, and for carpet waste for calendar year 2025. ²²

RPS ²³	Large Utilities: 25% by 2025 Small Utilities: 10% by 2025 Smallest Utilities: 5% by 2025
Statutes and Regulations	Net Metering Fuel Mix and Emissions Disclosure Interconnection Standards
Sustainability Commitments	State of Oregon University of Oregon Oregon State University The City of Portland The City of Eugene University of Puget Sound Portland State University
State Funding Opportunities	Renewable Energy Systems Exemption Custom Renewable Energy Projects Biomass Producer or Collector Tax Credit Renewable Energy Development Grant Program

Biogas Companies Located in OR

[Campus Biogas Energy, LLC](#)
[Clean Methane Systems LLC](#)
[Energy Trust of Oregon](#)
[Essential Consulting Oregon, LLC \(EC Oregon\)](#)
[Siemens Industry, Inc.](#)
[Stoel Rives LLP](#)
[The Climate Trust](#)
[Wastewater Capital Management, LLC](#)
 + Dozens More

Oregon Biogas Resources:

[Oregon.gov](#)

The site details anaerobic digester growth in Oregon, digester technology, types of anaerobic digesters, the digester process, and the difference between manure, wastewater, and landfill digesters.

[Oregon Association of Clean Water agencies](#)

The OACWA has detailed reports pertaining to clean water that include anaerobic digesters and the production of biogas.

[Oregon Green Energy Guide](#)

This green energy resource guide is an attempt to aggregate and survey information on sustainable energy in Portland and Oregon.

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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/Oregon/st41_1_0_17_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/Oregon/st41_1_0_20_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 <http://www.deq.state.or.us/lq/pubs/docs/sw/compost/FWCaseStudyProgramServesNeedyinJacksonCounty.pdf>
 - ²¹ <http://resourcerecoverydata.org/>
 - ²² <https://legiscan.com/OR/bill/SB263/2015>
 - ²³ <http://programs.dsireusa.org/system/program/detail/259>

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