



**AMERICAN  
BIOGAS  
COUNCIL**

# Biogas State Profile: Rhode Island

## Biogas Potential

Rhode Island ranks #47 among U.S. states for methane production potential from biogas sources.<sup>1</sup>

Currently Rhode Island has 6 operational biogas systems. We see the potential for more than 20 new projects to be developed based on the estimated amount of available organic material.

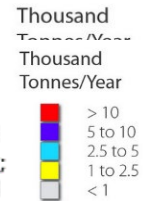
Constructing this many projects would generate \$20 million in capital investment, and create 500 short-term construction jobs, 40 long-term jobs, and numerous industry-supporting jobs.

If fully realized, these biogas systems could produce enough electricity to power 1,703 homes (47.8 million kWh) or enough renewable natural gas to fuel 6,968 vehicles.

They would also collectively reduce greenhouse gas emissions by the equivalent of 1.5 trillion tons of carbon dioxide, the same as growing 860 thousand tree seedlings for ten years or the amount 28,680 acres of U.S. American forest sequester each year..<sup>2</sup>



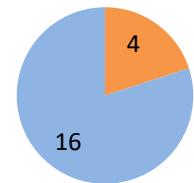
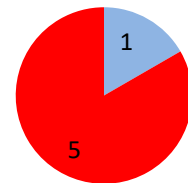
This analysis illustrates the methane generation potential by county from the following biogas sources: landfills; animal manure; wastewater treatment; and industrial, institutional, and commercial organic waste (IIC).



## U.S. Energy Rankings

Energy	
Total CO2 Emissions <sup>12</sup>	Ranks 49 <sup>th</sup> in U.S., 2.3% share
Per Capita Energy Consumption <sup>13</sup>	Ranks 50 <sup>th</sup> in U.S.
Renewable Electricity Generation <sup>14</sup>	Ranks 49 <sup>th</sup> in U.S.
Energy Prices Rank <sup>15</sup>	Ranks 4 <sup>th</sup> in U.S.

## Operational Systems    Potential Systems



■ Food Waste   ■ Agriculture   ■ Waste Water   ■ Landfill

## Biogas Systems

### Food Waste

Operational food waste biogas systems <sup>3</sup>	-
Potential food waste biogas systems <sup>4</sup>	4

### Agriculture

Operational biogas systems on farms <sup>5</sup>	-
Potential dairy farm biogas systems <sup>6</sup>	-
Potential # of swine operations that could have a biogas system <sup>7</sup>	-

### Waste Water

Operational biogas systems at Water Resource Recovery Facilities <sup>8</sup>	1
Potential swine farm biogas systems <sup>9</sup>	16

### Landfills

Operational landfill gas systems <sup>10</sup>	5
Potential landfill gas systems <sup>11</sup>	-

## Feedstocks

### Manure

Total Manure Volume <sup>16</sup>	30,000 gallons per day
Total Dairy Manure <sup>17</sup>	10,800 gallons per day
Total Swine Manure <sup>18</sup>	2,400 gallons per day
Total Beef Manure <sup>19</sup>	16,500 gallons per day

### Food Waste

Total Food Waste Generated <sup>20</sup>	178,000 tons per year
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\* All citations are available on [AmericanBiogasCouncil.org](http://AmericanBiogasCouncil.org).

## Waste Water

Average flow from WRRF's <sup>21</sup>	21 million gallons per day
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### Rhode Island Green Policies

RPS <sup>22</sup>	16% Renewable by 2019
Statutes & Regulations	<ul style="list-style-type: none"> <li style="text-align: center;">Net Metering</li> <li>Fuel Mix and Emissions Disclosure</li> <li>Building Energy Code</li> <li>Green Building Standard for State Facilities</li> <li>Energy Efficiency Resource Standard</li> <li>Interconnection Guidelines</li> <li>Renewable Energy Professional Certification</li> </ul>
Sustainability Commitments	<ul style="list-style-type: none"> <li>University of Rhode Island</li> <li>Sustainable Providence</li> <li>State of Rhode Island</li> <li>Brown University</li> </ul>
State Funded Opportunities	<ul style="list-style-type: none"> <li>Rhode Island Renewable Energy Fund</li> <li>Commercial-Scale Renewable-Energy Grants</li> <li>Renewable Energy Growth Program</li> <li>Energy Revolving Loan Fund</li> </ul>

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

### Rhode Island Biogas Resources:

#### Blue Sphere

Blue Sphere is an International Company active in the fields of organic Waste to energy, clean tech, and energy. They currently have a waste to energy project in Johnston, Rhode Island.

**American Biogas Council**  
**1211 Connecticut Ave, NW**  
**Suite 650**  
**Washington, DC 20036-2701**  
**(202) 640-6595**  
[info@americanbiogascouncil.org](mailto:info@americanbiogascouncil.org)

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- <sup>1</sup> <http://www.nrel.gov/docs/fy14osti/60178.pdf>
  - <sup>2</sup> (See ABC Biogas Potential Calculator)
  - <sup>3</sup> (See ABC Food Waste Digester Excel Spreadsheet)
  - <sup>4</sup> (See ABC Biogas Potential Calculator)
  - <sup>5</sup> <http://epa.gov/agstar/projects/index.html>
  - <sup>6</sup> [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Rhode\\_Island/st44\\_1\\_017\\_019.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Rhode_Island/st44_1_017_019.pdf) (Farms with 500 to 999 milk cows)
  - <sup>7</sup> [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Rhode\\_Island/st44\\_1\\_020\\_023.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Rhode_Island/st44_1_020_023.pdf) (Farms with 5,000 or more hogs)
  - <sup>8</sup> <http://resourcerecoverydata.org/>
  - <sup>9</sup> (See Above)
  - <sup>10</sup> <http://www.epa.gov/lmop/projects-candidates/operational.html>
  - <sup>11</sup> <http://www.epa.gov/lmop/projects-candidates/candidates.html>
  - <sup>12</sup> <http://www.eia.gov/state/rankings/?sid=CA#series/226>
  - <sup>13</sup> <http://www.eia.gov/state/?sid=CA#tabs-5>
  - <sup>14</sup> (See Above)
  - <sup>15</sup> <http://www.eia.gov/state/rankings/#/series/31>
  - <sup>16</sup> (See EQIP State Matrix Livestock Inventory)
  - <sup>17</sup> (See Above)
  - <sup>18</sup> (See Above)
  - <sup>19</sup> (See Above)
  - <sup>20</sup> [http://www.planning.ri.gov/documents/LU/swmp/RISWMP%20DRAFT\\_4.24.14.pdf](http://www.planning.ri.gov/documents/LU/swmp/RISWMP%20DRAFT_4.24.14.pdf)
  - <sup>21</sup> <http://resourcerecoverydata.org/>
  - <sup>22</sup> <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx#ri>

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