



# Biogas State Profile: Connecticut

## Biogas Potential

Connecticut ranks #40 among U.S. states for methane production potential from biogas sources.<sup>1</sup>

Currently Connecticut has 14 operational biogas systems. We see the near term potential for more than 68 new projects to be developed based on the estimated amount of available organic material.

Constructing this many projects would generate \$204 million in capital investment, and create 1,700 short-term construction jobs, 136 long-term jobs, and numerous industry-supporting jobs.

If fully realized, these biogas systems could produce enough electricity to power 6,763 homes (173.3 million kWh) or enough renewable natural gas to fuel 25,162 vehicles.

They would also collectively reduce greenhouse gas emissions by the equivalent of 5.4 trillion tons of carbon dioxide, the same as growing 3.1 million tree seedlings for ten years or the amount 104,000 acres of U.S. American forest sequester each year.<sup>2</sup>

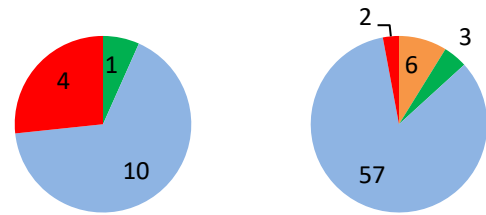


This analysis illustrates the methane generation potential by county from the following biogas sources: landfills; animal manure; wastewater treatment; and industrial, institutional, and commercial organic waste (IIC).  
 Thousand Tonnes/Year  
 > 10  
 5 to 10  
 2.5 to 5  
 1 to 2.5  
 < 1

## U.S. Energy Rankings

Energy	
Total CO2 Emissions <sup>12</sup>	Ranks 41 <sup>st</sup> in U.S., .6% share
Per Capita Energy Consumption <sup>13</sup>	Ranks 46 <sup>th</sup> in U.S.
Renewable Electricity Generation <sup>14</sup>	Ranks 44 <sup>th</sup> in U.S.
Energy Prices Rank <sup>15</sup>	Ranks 3 <sup>rd</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>	6

### Agriculture

Operational biogas systems on farms <sup>5</sup>	1
Potential dairy farm biogas systems <sup>6</sup>	3
Potential swine farm biogas systems <sup>7</sup>	-

### Waste Water

Operational biogas systems at water resource recovery facilities <sup>8</sup>	10
Potential biogas systems at WRRFS <sup>9</sup>	57

### Landfills

Operational landfill gas systems <sup>10</sup>	4
Potential landfill gas systems <sup>11</sup>	2

## Feedstocks

### Manure

Total Manure Volume <sup>16</sup>	400 thousand gallons per day
Total Dairy Manure <sup>17</sup>	342 thousand gallons per day
Total Swine Manure <sup>18</sup>	3,900 gallons per day
Total Beef Manure <sup>19</sup>	55 thousand gallons per day

### Food Waste

Total Food Waste Generated <sup>20</sup>	322 thousand tons per year
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### Waste Water

Average flow from WRRF's <sup>21</sup>	5.5 million gallons per day
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\* All citations are available on [AmericanBiogasCouncil.org](http://AmericanBiogasCouncil.org).

## Connecticut Green Policies

**Anaerobic Digestion:** House Bill 6020 was passed on July 2<sup>nd</sup> and signed into law by the governor. It extends the anaerobic digestion pilot program that promotes economic prosperity of Connecticut farms and businesses by using organic waste with on-site anaerobic digestion facilities to generate electricity and heat.<sup>22</sup>

RPS <sup>23</sup>	27% renewable by 2020
Statutes & Regulations	<a href="#">Fuel Mix and Emissions Disclosure</a> <a href="#">Net Metering</a> <a href="#">Interconnection Standard</a> <a href="#">CT Clean Energy Communities</a> <a href="#">Energy Efficiency Fund</a> <a href="#">Energy Efficiency Requirements for State Government</a> <a href="#">Building Energy Code</a>
Sustainability Commitments	<a href="#">Green Power Purchase Plan</a> <a href="#">Eastern Connecticut State University</a> <a href="#">Southern Connecticut State University</a> <a href="#">Connecticut College</a> <a href="#">Quinnipiac University'</a> <a href="#">Sustainable Stamford</a> <a href="#">City of Bridgeport</a> <a href="#">City of Middletown</a>
State Funding Opportunities	<a href="#">Connecticut Clean energy Fund</a> <a href="#">Energy Conservation Loan</a> <a href="#">Property Tax Exemption for Renewable Energy Systems</a> <a href="#">Clean Energy On-Bill Financing</a> <a href="#">Commercial and Industrial Rebate Program</a>

## Biogas Companies Located in CT

[CJ4 Biogas](#)  
[Harvest Power](#)  
[Turning Earth LLC](#)  
[Quantum Bioenergy](#)  
 + Dozens More

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

### Connecticut Biogas Resources:

[Connecticut Department of Energy and Environmental Protection \(DEEP\)](#)  
 (DEEP) is charged with conserving, improving and protecting the natural resources and the environment of the state of Connecticut as well as making cheaper, cleaner and more reliable energy available for the people and businesses of the state.

#### [Energize Connecticut](#)

Energize Connecticut is an initiative dedicated to empowering Connecticut citizens to make smart energy choices, now and in the future.

#### [Biogas Energy Solutions](#)

BES is among the largest developers of landfill gas-to-energy projects in the United States.

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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/Connecticut/st09\\_1\\_017\\_019.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Connecticut/st09_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/Connecticut/st09\\_1\\_020\\_023.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Connecticut/st09_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.ct.gov/deep/cwp/view.asp?a=2718&q=552676&deepNav\\_GID=1645](http://www.ct.gov/deep/cwp/view.asp?a=2718&q=552676&deepNav_GID=1645)
  - <sup>21</sup> <http://resourcerecoverydata.org/>
  - <sup>22</sup> <https://legiscan.com/CT/bill/HB06020/2015>
  - <sup>23</sup> <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx#ct>

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