



# RNG Resources from EPA Partnership Programs

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# Overview

- EPA Voluntary Methane Partnership Programs
- RNG Project Maps
- Upcoming Events and Program News

# Terms Used in This Presentation

## **Biogas**

Gas resulting from the decomposition of organic matter under anaerobic conditions. The principle constituents are methane and carbon dioxide.

Raw biogas has a methane content between 45 and 65 percent, depending on the source of the feedstock, and must go through a series of steps to be converted into RNG.

## **Renewable Natural Gas (RNG)\***

Biogas that has been upgraded for use in place of fossil natural gas.

*\*RNG is a “term of art” and there is not at present a standard definition. This description has been developed by EPA’s voluntary programs.*

# EPA Voluntary Methane Partnership Programs



# Information for the Agriculture Sector

[www.epa.gov/agstar](http://www.epa.gov/agstar)



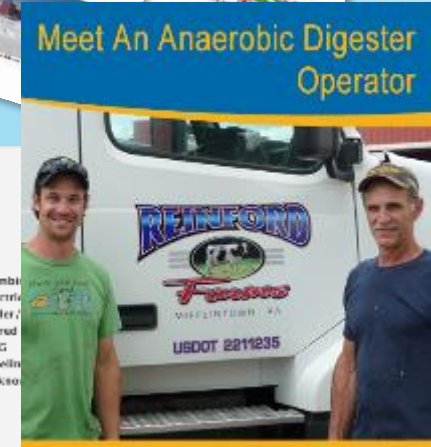
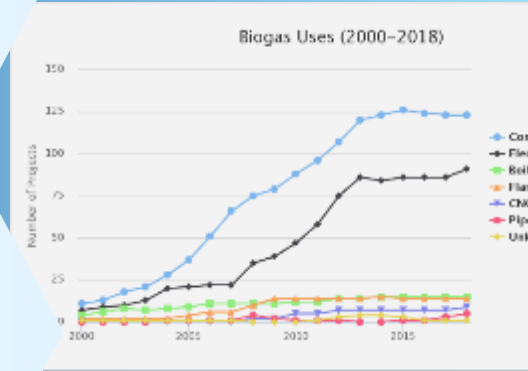
## Success Stories

- Project profiles
- Interviews with operators



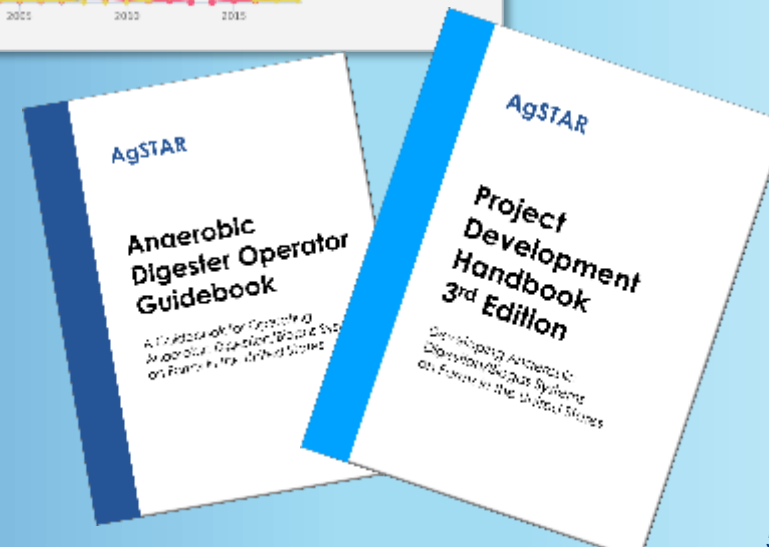
## Market Trends

- National data for anaerobic digester projects
- Opportunities



## Technical Information

- Guidelines and permitting
- Updated project handbook (coming soon)
- Operators guidebook (coming soon)



## Collaboration

- Webinars
- Industry events

# Information for the Landfill & LFG Energy Sector

[www.epa.gov/lmop](http://www.epa.gov/lmop)



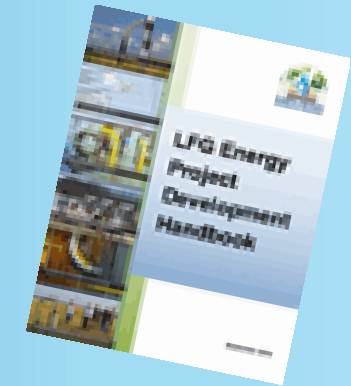
## Tools

- LFGcost-Web
- RNG Flow Rate Tool
- LFG Energy Benefits Calculator
- Conversion Tool



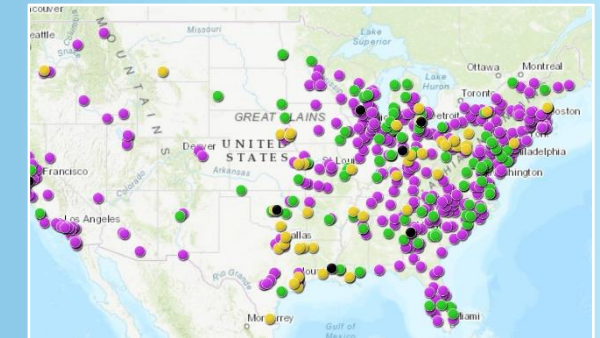
## Technical Publications

- Project Development Handbook
- Fact sheets



## Data

- Excel files and GIS map
- LFG energy projects
- Candidate landfills



## Network

- Webinars and other events
- 1,000+ LMOP Partners
- Listserv messages



# Information for the Oil and Natural Gas Sector

[www.epa.gov/gasstar](http://www.epa.gov/gasstar)



## Recommended Technologies

- Lessons Learned Studies
- Technology fact sheets
- Organized by equipment type

## Technical Presentations

- Links to hundreds of presentations from industry experts, program partners, and stakeholders
- Searchable by title, speaker, and event

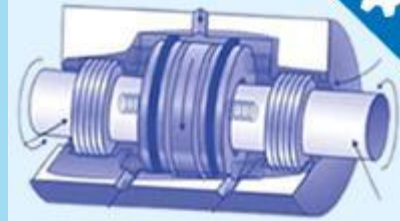
## Outreach and Events

- Webinars (Program Updates and Data Analytics)
- Technology Transfer Workshops
- Partnership Workshops

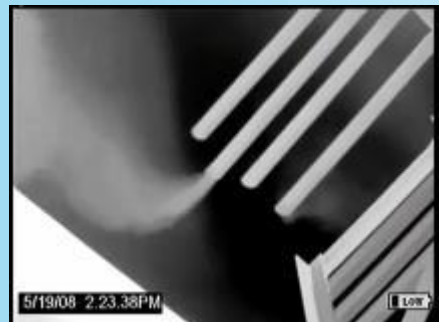
## Methane Emissions Videos

- Remote sensing leak detection
- Infrared methane videos

## Technologies



## Presentations



# RNG Project Maps



# Voluntary Methane Partnership Programs RNG Website



Environmental Topics

Laws & Regulations

About EPA

Search EPA.gov



## Landfill Methane Outreach Program (LMOP)

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LMOP Home

About LMOP

Basic Information about  
Landfill Gas

**Renewable Natural Gas**

Benefits of LFG Energy  
Projects

LFG Energy Project Data  
and Landfill Technical Data

LMOP Partners

Join the Program

Publications, Tools and  
Resources

LMOP Webinars and Events

Frequent Questions about  
Landfill Gas

## Renewable Natural Gas

### On this page:

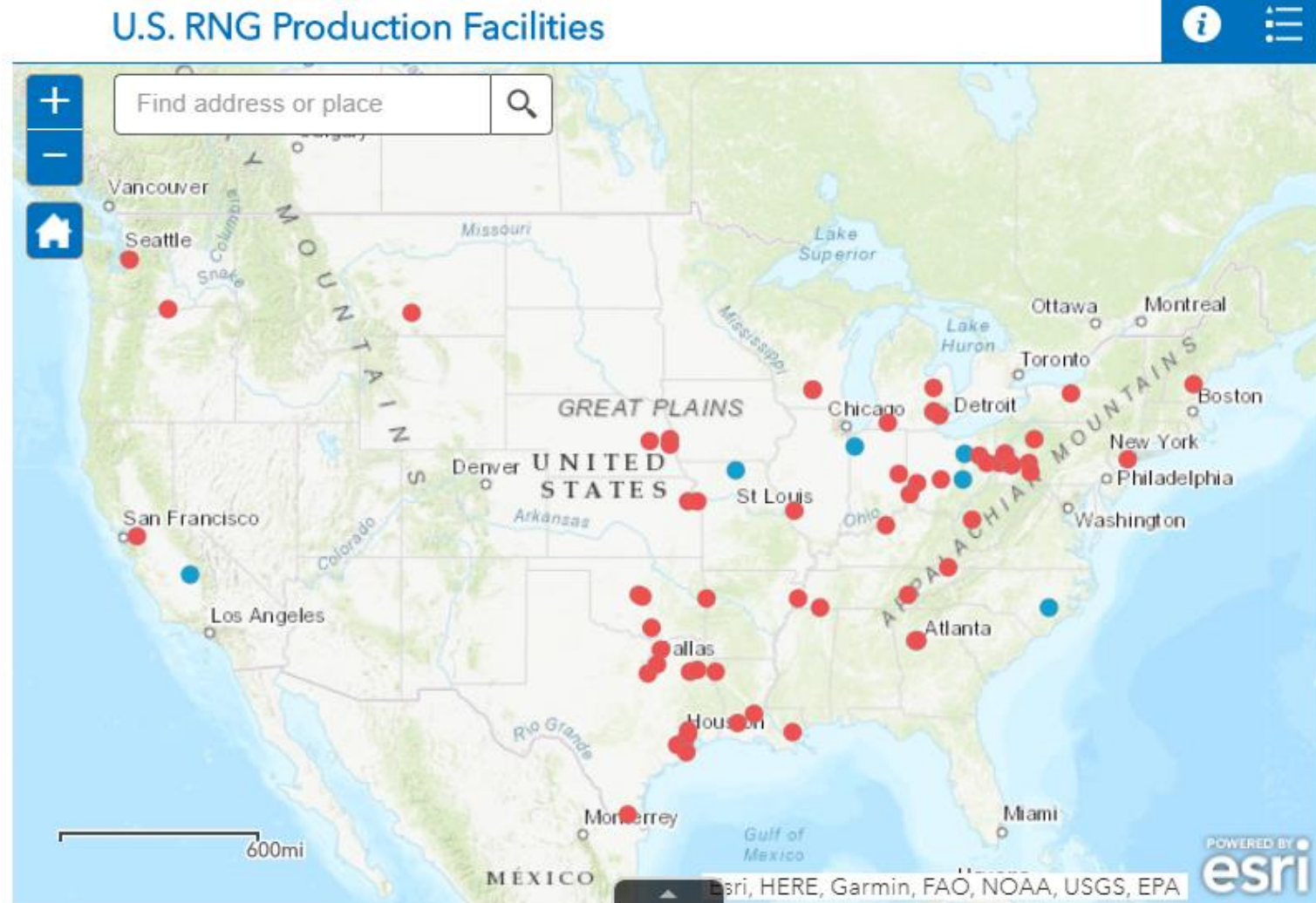
- [Basic Information about Renewable Natural Gas \(RNG\)](#)
- [RNG Project Map](#)
- [Benefits](#)
- [Resources](#)
- [More Information on RNG](#)

## Basic Information about RNG

Renewable natural gas (RNG)\* is a term used to describe biogas that has been upgraded for use in place of fossil natural gas. The biogas used to produce RNG comes from a variety of sources, including municipal solid waste landfills, digesters at water resource recovery facilities (wastewater treatment plants), livestock farms, food production facilities and organic waste management operations.

As a substitute for natural gas, RNG has many end uses:

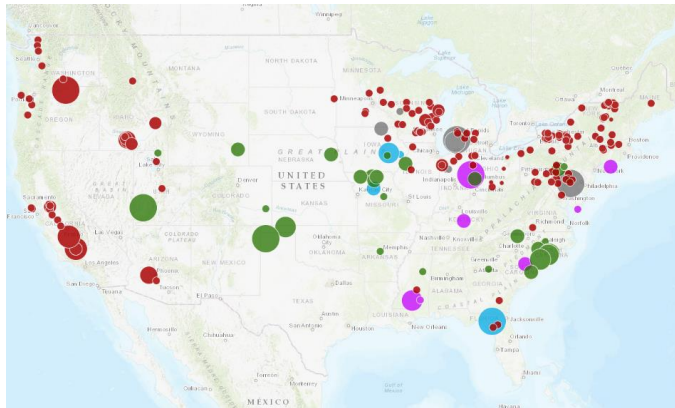
# RNG Project Map



# Biogas Project Maps

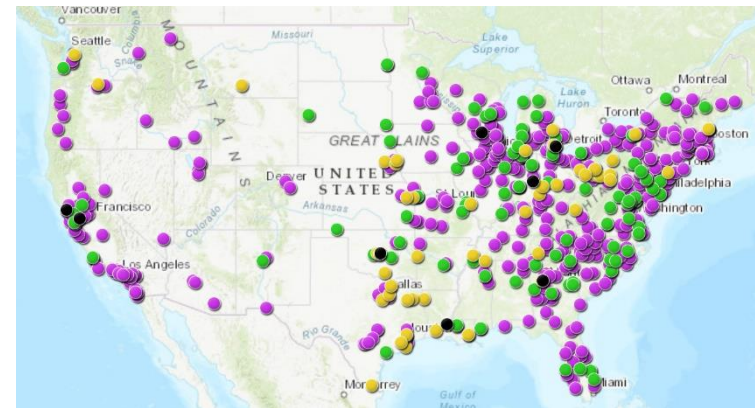
## AgSTAR Project Map

<https://www.epa.gov/agstar>

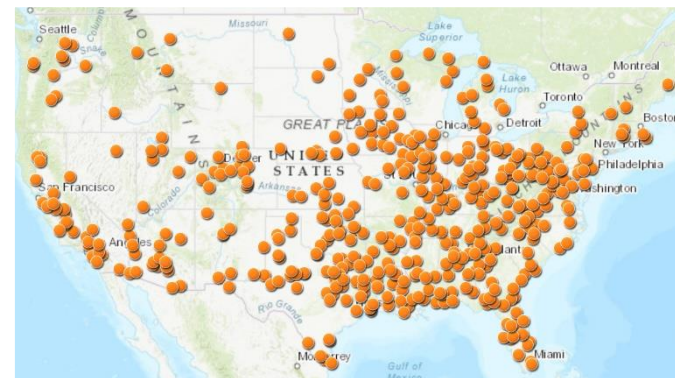


## LMOP Project Map

<https://www.epa.gov/lmop/lmop-national-map>



## LMOP Candidate Landfills



# How Can We Work Together

- Project databases and maps
- Events and networking
- Webinars
- Listserv messages
- Technical information to facilitate project development

# Upcoming Events and Program News

# Global Methane Initiative Biogas Subcommittee Meeting and BioCycle REFOR19



Oct 28–31, 2019  
Madison, WI

Photo Credit: Richard Hurd, [CC BY 2.0](#)

# 2019 Natural Gas STAR & Methane Challenge Workshop

Nov 4-6, 2019  
Pittsburgh, PA





## **Methane Challenge Reporting is underway!**

BMP Reports Due: October 4  
ONE Future Reports Due: November 1

Methane Challenge Reporter with questions?  
Email: [ghgreporting@epa.gov](mailto:ghgreporting@epa.gov)



# EPA Voluntary Methane Partnership Programs

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[www.epa.gov/agstar](http://www.epa.gov/agstar)



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