Sustainable Gas Systems - Public Policies:
Renewable Natural Gas (RNG)

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Coalition for Renewable Natural Gas
1. RNG Coalition: Mission, Philosophy, Position & Priority

2. RNG 101: Product, Feedstock Sources & End-Uses

3. RNG Production: Past, Present & Future (Projected)

4. Production Impediments: Policies, Market Realities
RNG COALITION - INTRO

- Policy Platform, Advocacy & Education Voice for RNG Industry in North America
- Non-Profit Organization
- Each Industry Sector & Academia Represented (125+)
- Members Produce 90%+ of RNG in North America
- 95%+ of RFS-Qualified Cellulosic Biofuel
- Industry Competitors Collaborating for Common Good
RNG COALITION - MEMBERS
RNG COALITION – ACADEMIA MEMBERS
MISSION

We advocate for increased development, deployment and utilization of renewable natural gas, so that present and future generations will have access to this domestic, renewable, clean fuel & energy supply.
PHILOSOPHY

Advocacy & Education informs Public Policy.
Public Policies influence Markets.
Markets drive Demand.
Demand determines Value.
Value impacts Revenue.
Revenue affects Sustainability.
We support development, deployment and utilization of RNG from a diversity of FEEDSTOCKS, using competing TECHNOLOGIES, for sustainable END-USE APPLICATIONS.
*Enable the RNG industry to develop & double the number of operating RNG projects in North America by 2025.

*Target = 100 projects by 2025  
(based on 47 RNG projects operating in 2015)
What is RNG?
Renewable Natural Gas is a product gas derived from the natural decomposition of organic materials in renewable waste streams.
Renewable Natural Gas is commonly referred to as: **RNG** or **Biomethane** or **Upgraded Biogas**.

(Industry definitions available for: biogas, conditioned biogas, biomethane, RNG, R-CNG, R-LNG)
RNG PRODUCT

RNG:
Interchangeable substitute or replacement for Natural Gas.

RNG (Renewable)
Natural Gas (Geologic)
What is RNG produced from?
RNG FEEDSTOCK SOURCES (US)

POTENTIAL SOURCES OF ORGANICS USED TO PRODUCE RNG INCLUDE:

- **FOOD WASTE**: 66.5 MILLION TONS / YEAR
- **WASTEWATER**: 17,000 FACILITIES
- **AGRICULTURE WASTE**: 8,000 LARGE FARMS AND DAIRIES
- **LANDFILL GAS**: 1,750 LANDFILLS

WWTP / MSW (100,000 residents);
AD (500 head of cattle or as low as 150 when mixing with organics);
Other sources include Forestry Biomass and Forest Product Residue, FOGS, etc.
265 Livestock AD Projects:
(EPA AgStar – Beef, Dairy, Hog, Poultry)
RNG FEEDSTOCK SOURCES

637 LFG Projects; 398 Candidates:
(US EPA Landfill Methane Outreach Program)
Policies Driving RNG Production
Historically, state RPS programs have driven production of RNG as a clean, renewable, electric power to displace coal and replace geologic natural gas.
1st RNG Project Developed (Still Operating): Fresh Kills Landfill (Staten Island, NY)
RNG PAST

1982-2011

30 Years Industry History:
31 RNG Projects Developed

(Nearly 100% Off-Site Electric Generation)
6.5 Years Since RNG Coalition Founding:
41 RNG Projects Developed

(76% Transportation Fuel & 24% Power Generation)
Increasingly, federal, state/provincial policy programs (RFS, LCFS, CFP) are driving production of RNG as ultra-low carbon fuel for a new generation of medium- and heavy-duty Natural Gas Vehicles.

(Production for transportation fuel = increased 10x since 2014)
72+ RNG Projects Now Operating
16+ New RNG Projects being Developed
16 Projects undergoing Expansion
RNG PROJECTED

2018-2030

RNG POTENTIAL (CALIFORNIA):
200 Dairies + 100 WWTP + 50 Landfills =
+ 1 – 2 billion DGEs of RNG

Enough RNG to displace 15-60%+ of Diesel consumption
or power 2-3 million homes annually (CA)
RNG PROJECTED

CALIFORNIA

ACTUAL IN-STATE OPERATING
RNG-to-Transportation Fuel
Production Facilities

5

Altamont (Landfill); Blue Line Biogenic CNG (AD)
City of San Mateo (WWTP); North State BioDigester (AD);
Sacramento BioDigester (AD);
WHY ONLY 5?

1. Permitting & Production Costs
2. Market Uncertainty (LCFS, etc.)
3. Pipeline Access
4. Vehicle Demand
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