CNGPA
California Natural Gas Producers Association
"California's Clean Energy Source"

SeaHold®

strategic business development

ANNUAL MEETING AM09

June 4 - 7
La Costa Resort & Spa
Carlsbad, California

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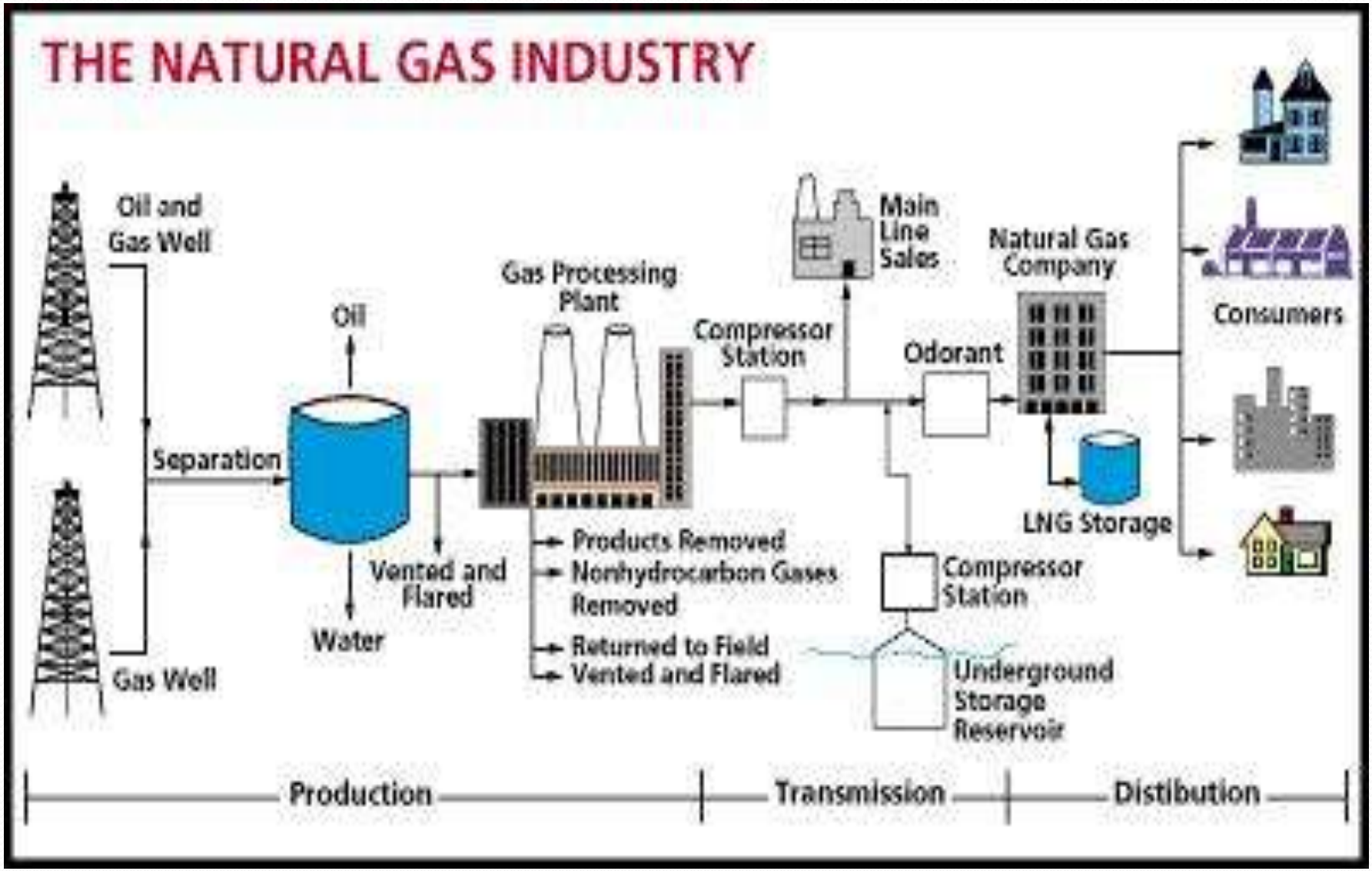
Mission Statement

- **SeaHold creates value by**
  - Qualifying renewable energy projects
  - Delivering *multiple stakeholder* benefits
  - Identifying feasible solutions
  - Leveraging industry and financial contacts, moving from concept to profits

SeaHold

Thomas M. Hintz, Member Partner

- 20 years Business Development Experience
  - Inaugurated cow gas in CA – *delivery to natural gas grid!*
  - Permitting renewable energy park and projects
  - Contracting with energy, utility and technology firms
  - Moving regulatory agendas forward
  - Proven value creation history
  - Starting up to ongoing operations


THE NATURAL GAS INDUSTRY
Oil and Gas Well
Gas Well
Separation
Oil
Water
Vented and Flared
Gas Processing Plant
Products Removed
Nonhydrocarbon Gases Removed
Returned to Field
Vented and Flared
Compressor Station
Main Line Sales
Natural Gas Company
Odorant
LNG Storage
Compressor Station
Underground Storage Reservoir
Consumers
Production
Transmission
Distibution

Four Foot Gas Development

Manure to Blue Flame

Methane Capture and Use

- The only renewable energy projects that directly reduce greenhouse gas emissions and generate energy!

Biogas Recovery?

BIOMETHANE – Best Renewable Fuel

Anaerobic Digesters – Best Renewable Energy Technology

Biomethane Facts

- **Biomethane** is one of the most **common** and **harmful** of all "Greenhouse Gas" emissions

- **Biomethane** is 21 **Times** more **harmful** to the climate than "Carbon Dioxide" emissions. Stated another way – **Biomethane causes Global Warming and climate change to increase 21 times faster** than "Carbon Dioxide" emissions

- **Biomethane** is a **Renewable Natural Gas**

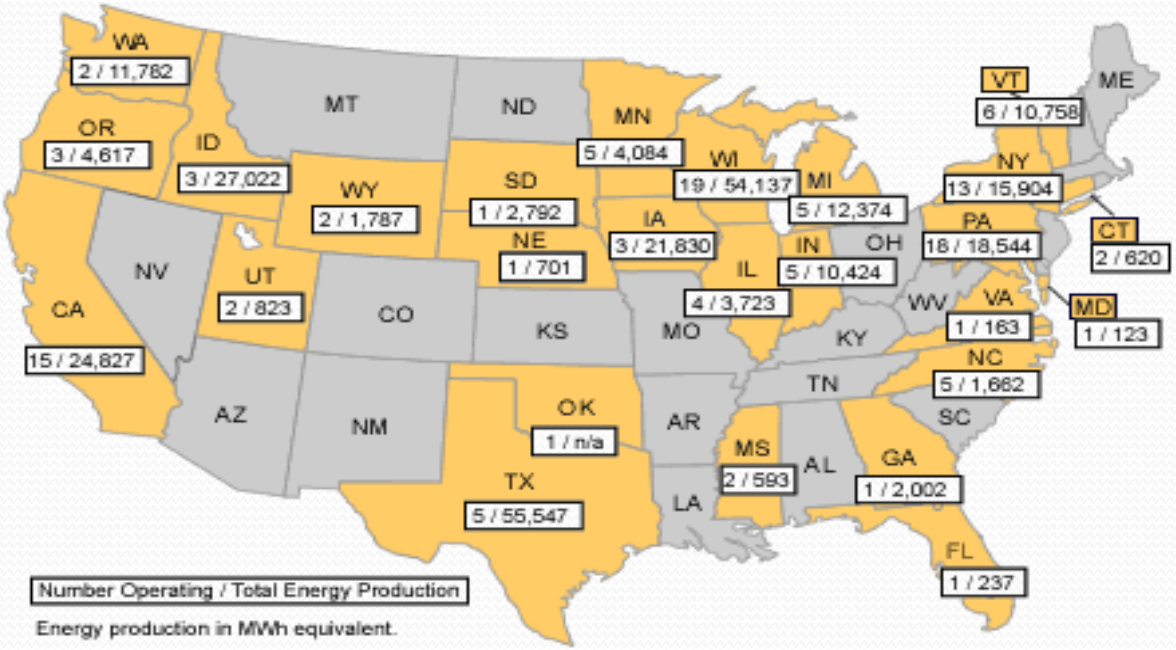
- **Biomethane** is one of the **easiest and most profitable** of all "Greenhouse Gases" to recover and control

Brown to Blue

Large Lagoon Digester

Joseph Gallo Dairy – Cottonwood, CA

Operating Digesters



Source: US Environmental Protection Agency/AGSTAR

Possible Dairy Sites

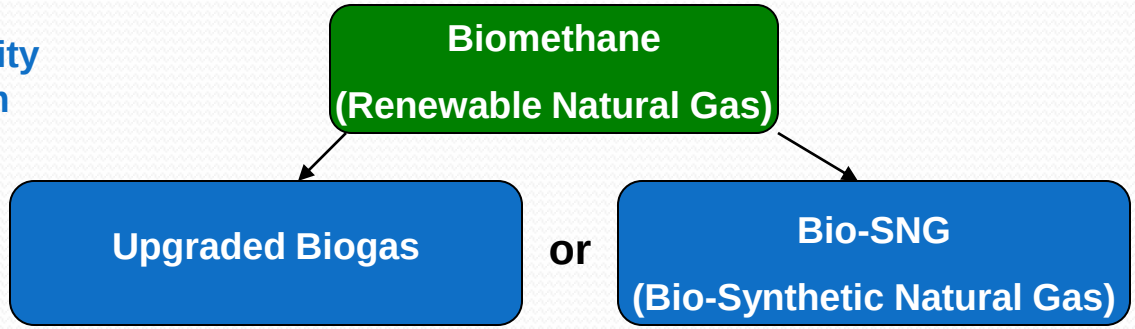
Color	*# of Cows*	*kW*
Red	<10,000	< 520
Blue	10-50,000	520-2600
Yellow	50-100,000	2600-5200
Green	>100,000	>5200

1722 Dairies

1,830,000 Dairy Cows

What is Biomethane?
Production Potential in California?

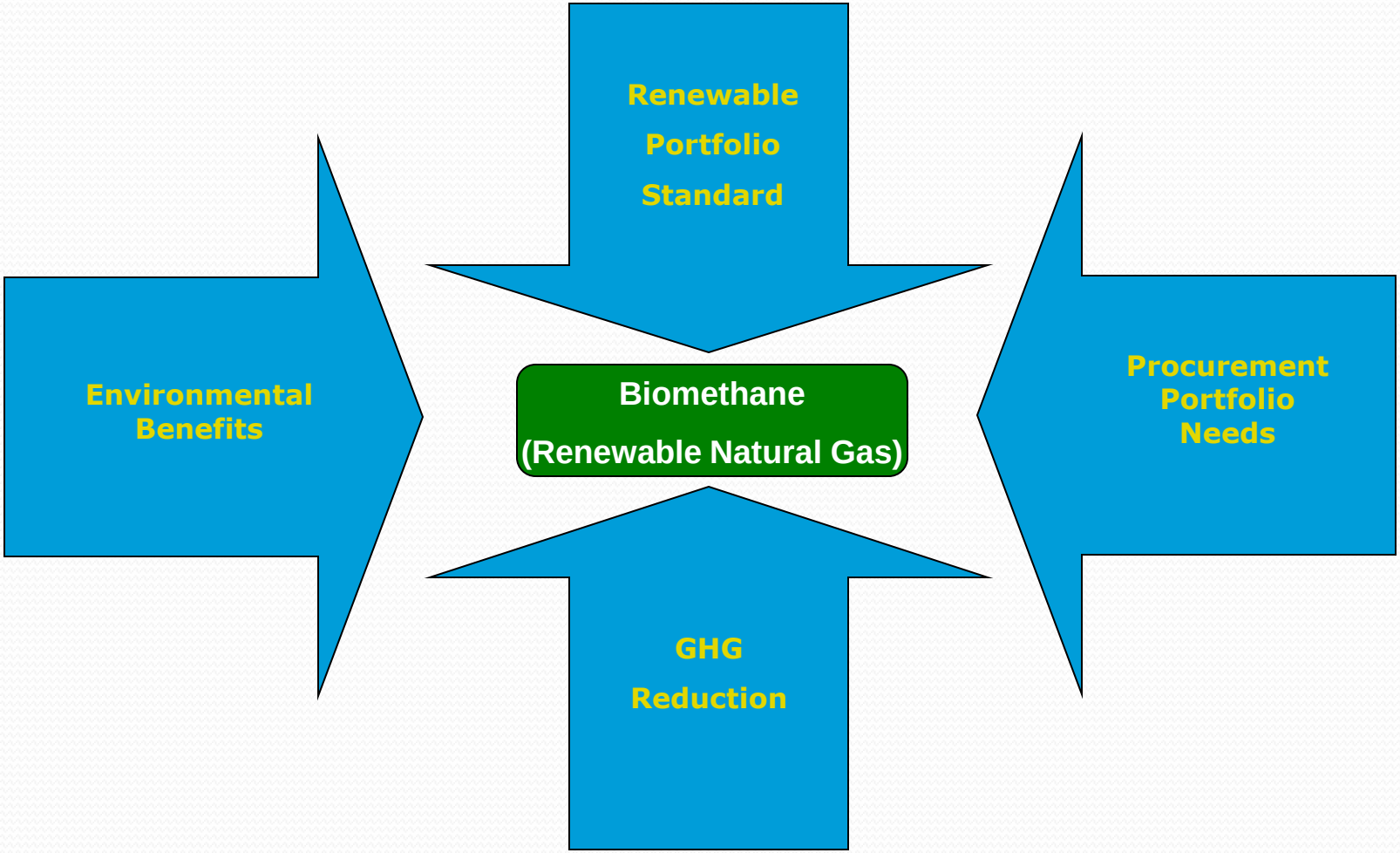
Biomethane is pipeline-quality natural gas generated from biomass resources



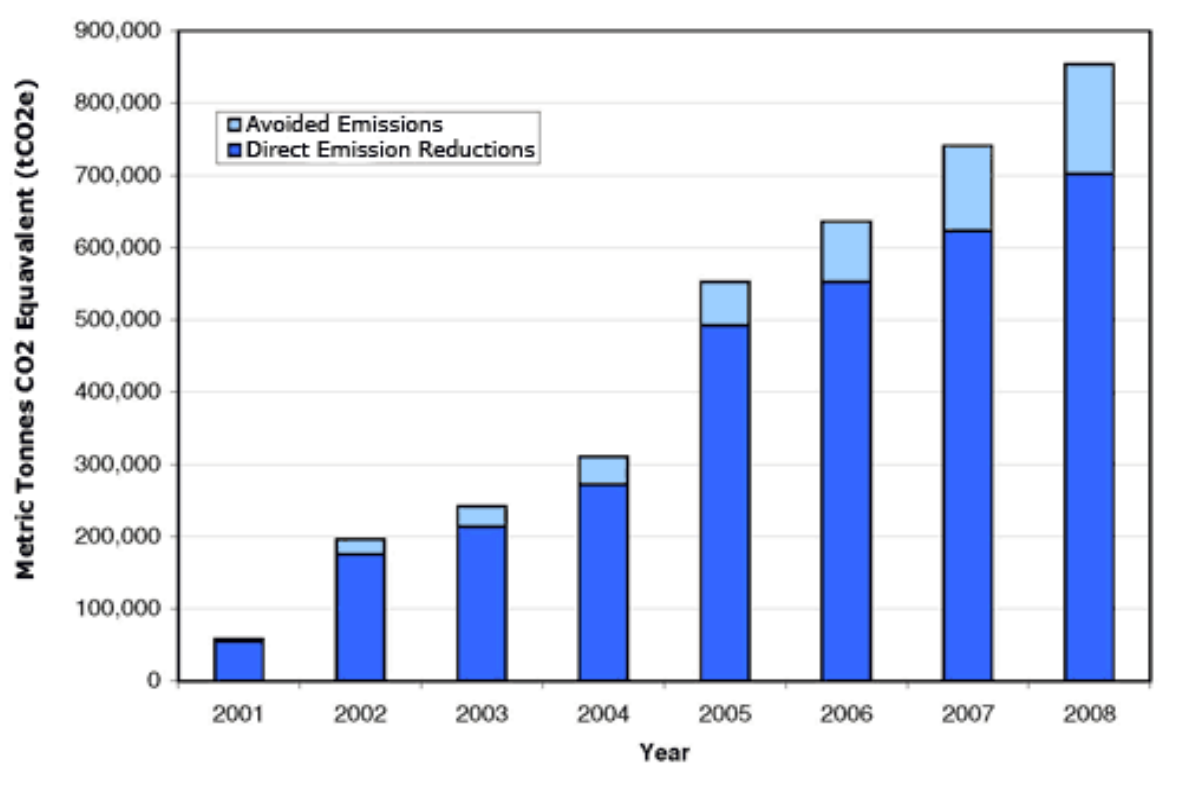
	Upgraded Biogas	Bio-SNG
Technology:	Anaerobic Digestion/Fermentation (Biochemical Process)	Gasification & Methanation (Thermo chemical Process)
Status:	Commercially available	In Development
Implementation:	Today	2010
Feedstock:	Wet biomass – animal waste, food waste, wastewater, landfills	Dry biomass – ag waste, forest waste, municipal solid waste
Project Scale:	Small (200-400 decatherms/day/6000 cows)	Large (18,000 decatherms/day/15,500 tons per day plant)
Statewide Potential:	Limited (20,000-40,000 Dth/day)	Large (200,000 Dth/day)

Both processes can deliver a product that is interchangeable with conventional natural gas

Why Is Biomethane Important To Electrical Utilities?



BioMethane Reduces C02 Emissions !



Source: US Environmental Protection Agency/AGSTAR

Potential BioGas Production - Statewide

- 1,830,000 Dairy Cows in CA today (CA Dept Food & Agriculture)
- 312,000,000 mmbtu potential "Dairy Gas" production/yearly
- 2,311,000,000 mmbtu native CA statewide gas demand (13% supplied by CA production)
- "Dairy Gas" = 1.2% potential demand
- *43% of all natural gas is used in electricity generation*
  (State Of California Energy Commission 2006 Study)
- *WE WILL NEED NATURAL GAS FOR A LONG TIME!*

What do you have in common with the new kids?

- Regulation by the same entities
- Production
- Upgrade
- Gathering lines needed
- Interconnection
- The same technology base of vendors
- The same skill sets needed, but add biology
- Desire to lower capital equipment and unit costs
- Access to trained, capable, technical talent
- Energy production made in California

What are the differences with the new kids?

- **Experience across the board from development to delivery**
- Production assets in place
- Operating history
- Production starting pressures
- Production of GHG (carbon credits)

SeaHold Perspective

- Size of the market of “Natural Gas”
- Common interests common challenges
- Cooperation
- Seeking an integrated solution?
- Leverage assets experience

SeaHold suggestions

- Seize the green trend
  - Waste biomass+ Stranded gas to energy= revenues
    - BTUs and Carbon Offset Credits
    - Co-locations
- Solve our own problems together
  - MFGs and Developers will not
    - Unlikely any will take you from green to blue
- Combine the two industries
  - scale, access and location

SeaHold suggestions cont'd

- Market *Potential* BTUs
  - Utilities/Brokers/Direct
- Attract Long-term Partners
  - Vested in water quality/energy/agriculture
- Ask why things are done a certain way?
  - Gain a new perspective on the issues
- Be a new market/correct market
  - Attract innovation = New solutions

Conceptual Solution

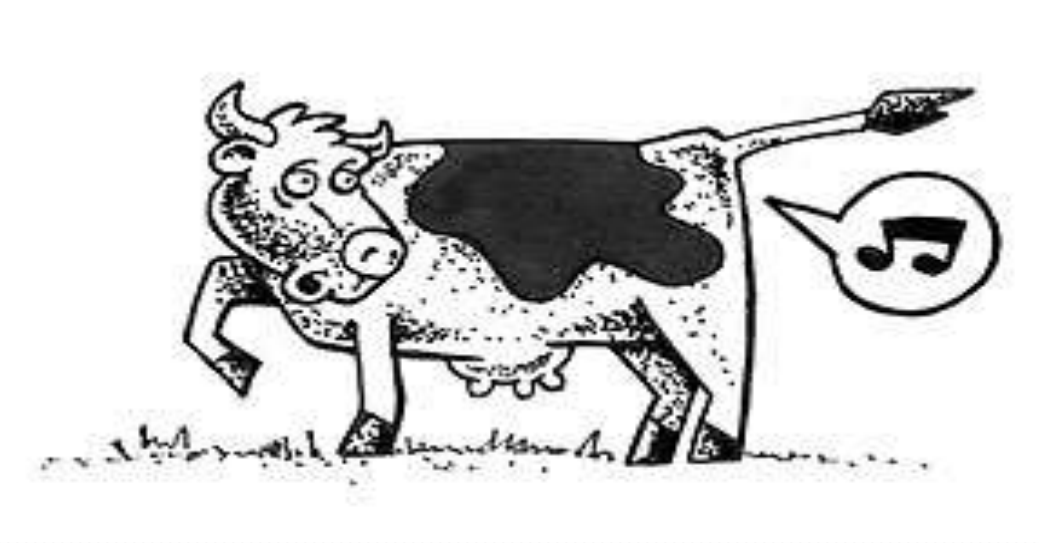
- Using lower value gas (stranded gas) to assist biogas recovery systems from waste, delivering upgraded renewable fuels with GHC credits
- Green dollars offset costs of capital expenditures
- Offer traditional producers the opportunity to be part of the GLOBAL solution
- Create additional revenue from the processing of waste or low value gas streams

What is needed?

Leading Edge Systems That Perform:

- Lower cost per unit Gas Upgrading
  - H2S and CO2 removal at pennies per MMBTU
- Inexpensive gas analyzers
- Wide tolerance of variable flow metering
- Economical sized meter sets to inter-connect

Thank you



Questions & Answers

- Q & A
  - Questions?
  - Comments?
  - Discussion …