



### How Mobile Pipelines Deliver Value







- 1. REV LNG Company Background
- 2. Mobile Pipeline Applications
- 3. Fastest Growth Market RNG Virtual Pipelines



## **REV LNG Company Background**





# Innovators in NG Supply Chain management



#### An Integrated LNG, CNG, RNG Solutions Provider

- Based in Ulysses, Pennsylvania
- Vertically integrated "Well to Wheel" model
- Own & Operate LNG and CNG transportation fleet
- Specialists in LNG/CNG/RNG Project Development, Transportation, Storage & Re-Gas Infrastructure Solutions
- Leading RNG Development Company and Mobile Pipeline innovator

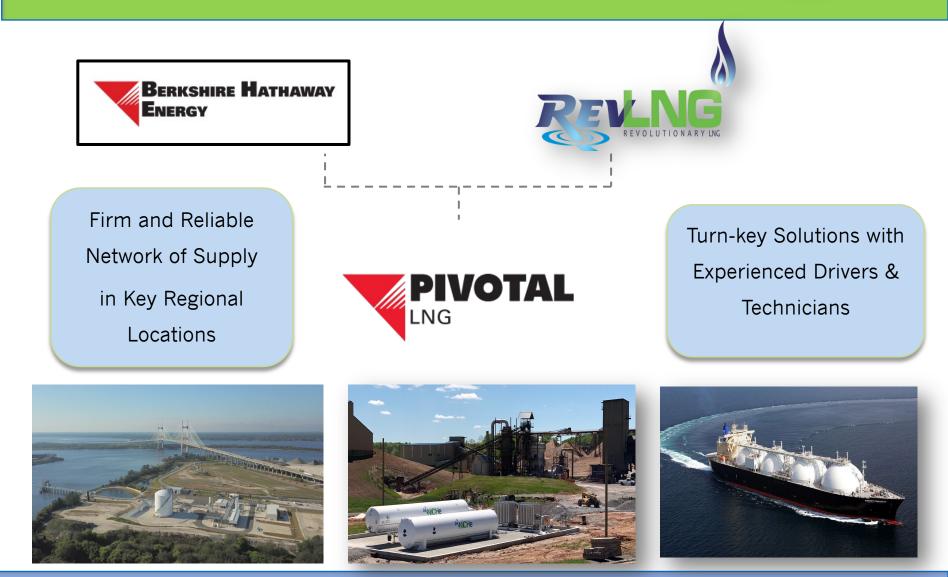


Proven, Experienced, Safe & Reliable



## **LNG Liquefaction Joint Venture**





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## **REV Services and Expertise**



#### **Key Services**

- Customized Turn-key Solutions & Project Management
- LNG/CNG/RNG Transportation & Logistics
- Peak Shaving w/ Onsite Storage
- Emergency Services w/ Quick and Dependable Response times
- Planned & Unplanned Maintenance Work
- Temporary or Long-Term "Gas Island" Customers
- RNG production site to Pipeline or Market injection site Mobile Pipeline Long-Term Contracts

#### Expertise

- Own and Operate one of the largest LNG Fleets in the Country
- Fleet of Class 8 Power Units and LNG tankers and other Assets
- Experienced Drivers and Technicians that are REV full-time Employees
- Firm rights to Supply Points for Firm and Dependable service
- Over 24 million **gallons** of LNG and CNG commodity transported
- Over 1.7 million **miles** of safe fuel transportation







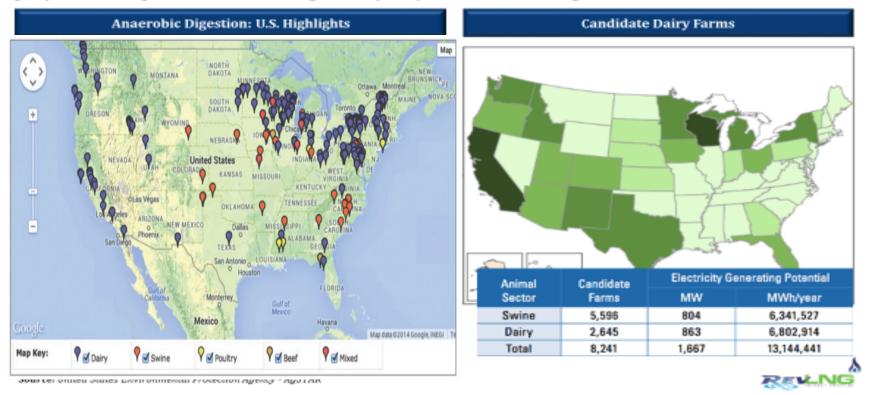
## **RNG Biogas:** General Overview





## Dairy Farm Bio-digester Market

AgSTAR estimates that biogas recovery systems are technically feasible at over 8,000 large dairy and hog operations. These farms could potentially generate nearly 16 million megawatt-hours (MWh) of energy per year and displace about 2,010 megawatts (MWs) of fossil fuel-fired generation.





### When RNG is utilized as a transportation fuel from a qualified feedstock, <u>credits can be generated and sold</u> increasing the market value of RNG

**CARB Low Carbon Fuel Standard (LCFS)** – program to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2030



**EPA Renewable Fuel Standard (RFS)** – Federal program that requires petroleum refiners and importers of gasoline demonstrate that a portion of the fuel they sell is renewable. Fuel volume requirements for 2023 expected shortly from EPA



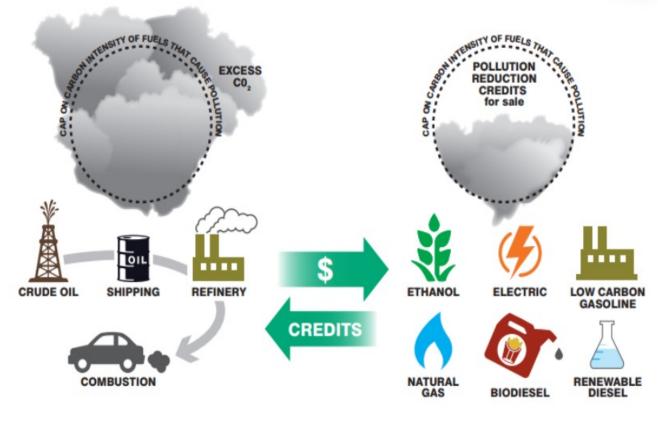
Commodity – (example: Henry Hub/Local Index)

RFS and LCFS credits are stackable, therefore (RNG) can be included in both programs. Subsequently, **you can get revenue from all 3 streams simultaneously** 

## **LCFS Credits and Deficits**

#### **LCFS Market:**

- Credits and Deficits
- 2032 timeline for Program
- 2040 timeline
- Low C.I Scored projects are the long term winners

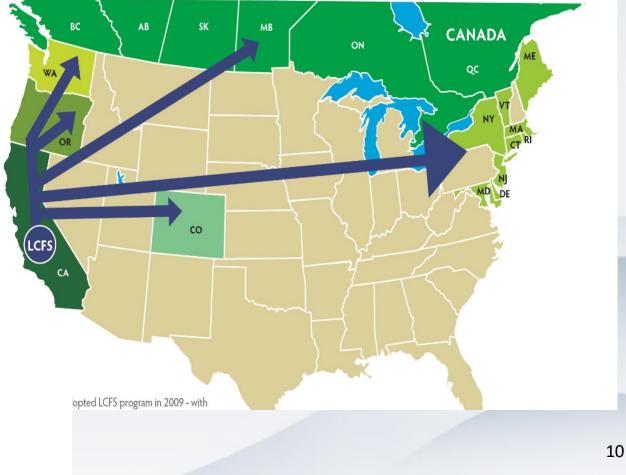


\* Source: US Gain

Businesses that sell fuel with carbon intensity ABOVE the cap must buy credits Businesses that sell fuel with carbon intensity BELOW the cap can sell excess credits Go East! LCFS Programs are being developed based on CA CARB Success Opportunity for mandated, voluntary and utility rate base programs

## Target States for new LCFS program:

- CO, CT, MA, MD, MI, MN, NC, NH, NJ, NM, NV, NY, OH, OR, TX, UT, VA, WA.
- Paired with the eventuality of Utility Commission Rate Recovery, RNG has solidified a path in Carbon Neutrality Strategies
- California Adopted LCFS program in 2009 with infrastructure credits and point-of-purchase rebate provisions
- Oregon Implemented "Clean Fuels" in 2016 a program similar to LCFS, without infrastructure credits and point-of-purchase rebate provisions
- Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, and Vermont - Adopted ZEV mandate
- Canada Environment Canada released the regulatory design paper for a national "Clean Fuel" program in late 2018
- Washington Considering implementing program similar to Oregon's "Clean Fuels"
- Colorado Considering adopting ZEV mandate



## **REV LNG Overview Operations and Project Development**



- Strong Natural Gas Operations Background led us into RNG in 2014 as a Mobile Pipeline Specialists
- 2017 Developed a series of projects in DAIRY RNG in WI
- Partnered with DTE BIOMASS (2018) for a RNG platform with 10 Dairy Farms producing in WI.
- 2019 Calumet RNG won RNG projector of the year
- 2020 Partnered with SJI to develop a platform of RNG projects nations wide









## **REV RNG DEVELOPMENT CAPABILITIES: DTE Wisconsin**



REV LNG signed Kinnard Dairy, Rosendale Dairy and New Chester dairy in 2019. These farms are some of the largest in the country and the digesters are fully operational as of May 2020, producing RNG that is being sold into the California marketplace.

**Project Background:** Building off the success of POD 1 where DTE and Rev safely and efficiently converted (7) farms in Wisconsin with existing digesters, REV expanded their plate to (3) large farms that required a total greenfield application of construction of the Anerobic Digester, the RNG processing facility and Mobile Pipeline for injection and monetization of the gas.

Farm Digester Name	Milking Cow Equivalent	MMBtu/yr	COD
Kinnard Dairy	8,200	167,281	May 2020
Rosendale Dairy	7,379	150,533	May 2020
New Chester Dairy	9,100	185,641	May 2020
Total Pod 2	24,679	503,455	

Wisconsin Pod 2 | New Builds



#### RNG Dairy Project Development, Digester Construction and RNG Mobile Pipeline







#### SJI RNG Active Construction





## Mobile Pipelines are Essential In Today's Clean Energy Revolution



- Only ~10% of all projects are direct inject
- RNG for Dairy and Swine farms are rural and typically no direct pipeline access
- Land fills have more accessibility
- Building pipelines is expensive, challenging and can have political opposition
- RNG typically requires hub and spoke configuration
- (1) Central Injection Facility that serves multiple farms via M.P.
- Tube trailers at ~440 MCF per load
- Provides long term jobs and technician employment
- REV has used Hexagon Lincoln 95% of all fleet because of Capacity, Safety, Scale and Ease of Use





## **Traditional Pipeline Vs Mobile Pipeline Economics**

### CNG Tankers vs Pipeline:

- What is the better fit?
- Miles of pipe cost per \$ foot vs Tanker
  Cap Ex and Op ex
- Typically, what we have seen is the \$3 mm we go to a virtual pipeline and over we use tankers
- Speed of set up can make a difference
- Cap Ex Vs Op Ex
- Drivers vs Valves (low and high point)







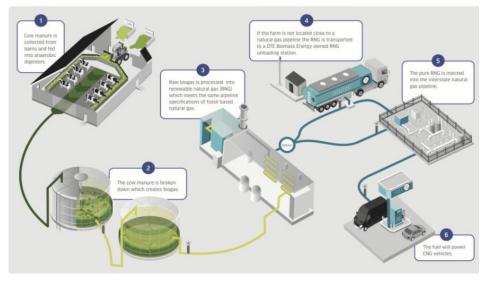
# Can you create sufficient scale at the injection sites and reduce capital by avoiding the construction of an injection site for each project.



### Injection Site Scale:

- Centralized location provides advantages
- Economies of scale for Cap Ex and Op Ex
- Multiple RNG sources trucked to central location
- Cost per Injection bay / Meters \$
- Facility BOP costs
- Tap, Buildings, Land etc
- Decompression/heaters
- Meters, Analyzers, Chromatographs, Historians
- Odorization?
- Miles, Drivers, Road Bondings
- Wisconsin location (7) farms flowing through with (6) mobile pipeline
- @ 1 BCF of RNG a year flowing
- Capacity to do 3 BCF a year





### **THANK YOU!**



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