RNG SUPPLY: HOW DOES IT WORK?

Brian Dolski Chief Financial Officer Pagel Family Businesses





INTRODUCTION

Energy Industry

- Credit/Risk Management
- Trading/Asset Management
- Compressed Natural Gas (CNG) Market
- \circ Renewable Credit Markets

Agribusiness • Chief Financial Officer

Carbon Project Developer Improved Forest Management ACR873



OUTLINE

1. What is RNG and how is it made

- $_{\odot}$ Anaerobic digestion
- \circ Feedstocks

Pagel Family Businesses RNG Projects Pagels Ponderosa Dairy Dreams

- 3. RNG Pathways • Physical Pathway
 - Contractual Pathway



WHAT IS RNG & HOW IS IT MADE?

What Is Renewable Natural Gas (RNG)?

- RNG is biomethane produced from a renewable source and sold as transportation fuel (CNG)
 - Landfills
 - Anaerobic Digesters (AD)
 - Manure
 - Food Waste
 - Wastewater Treatment Plants

How Is RNG made?

- Landfill or AD project produces Biogas ($\sim 50\%$ CO₂ + $\sim 50\%$ methane)
- Gas cleanup facility scrubs out impurities to produce biomethane
- Compressed Natural Gas (CNG) fueling station compresses biomethane
- and dispenses it as vehicle fuel (RNG)





PAGEL FAMILY BUSINESSES RNG PROJECTS

1. Pagels Ponderosa – 5,500 milk cows • 3.1M gallon digester capacity

2. Dairy Dreams – 3,000 milk cows • 2.1M gallon digester capacity

Built in 2009 to produce electricity under 10-year PPA
Converted from power to RNG in 2019
One of the first virtual pipeline RNG projects in the US
Currently producing approximately 1.3M DGE annually



PAGEL FAMILY BUSINESSES RNG PROJECTS









RNG PATHWAYS

Current Value Chain (RNG to CNG)

- 1. Physical Pathway
 - RNG Project
 - \circ Gas Interconnect
 - \circ Interstate Pipeline
 - CNG Fueling Station

2. Contractual Pathway

- Producer (RNG Project)
- Gas Marketer
- CNG Off-Taker
- Credit Broker







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