

## **RNG Transportation Fuel**

November 28, 2018





2017 CLEAN ENERGY **HIGHLIGHTS** 

351 MM GALLONS SOLD

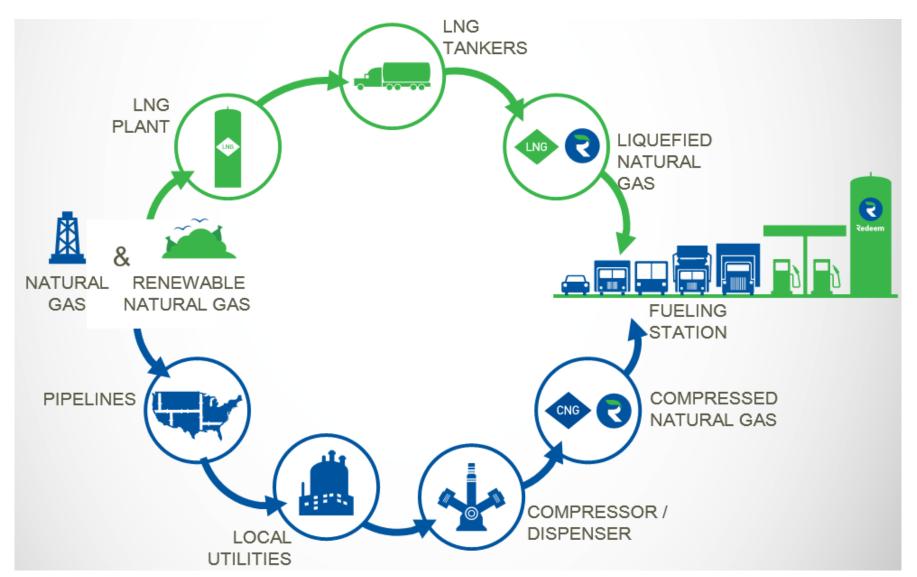
79 MM RNG GALLONS SOLD

\$342m \$ SOF REVENUE

NATURAL GAS FUELING INVESTMENT

43 STATES & CANADA

## Seamless Supply Chain = "Drop-In Fuel"



## Numerous Recognized Fleets & Shippers Fueling with Redeem™



















































## **RNG Market Drivers**

- Cleanest Fuel Available <u>Today.</u>
- 100% Renewable Fuel
- Existing policies/regulations
- Can replace CNG or LNG
- Achieves sustainability goals
  - From 70% reduction in GHG to entirely carbon negative
- Healthy RIN/LCFS credit prices
  - Allows for RNG project development
- Higher oil prices
  - Spurs greater fleet adoption but inversely impacts carbon credit prices











## Low Carbon Fuel Standard

- The Low Carbon Fuel Standard (LCFS) is California's primary greenhouse gas emissions reduction measure transportation fuels, requiring a 10% reduction in the carbon intensity (CI) of gasoline and diesel from 2010 levels by 2020
- LCFS sets annual CI limits for transportation fuels
- Fuel and fuel blendstocks generate credits and deficits depending on their CI relative to the applicable program standard for any given calendar year
- LCFS credit prices have had strong tailwinds in light of ambitious carbon reduction goals and biofuel supply shortage
- LCFS is a critical part of California's climate policy
  - California Air Resources Board is focused on LCFS as a primary GHG reduction mechanism

## Renewable Fuel Standard

 Renewable Fuel Standard 2 (RFS2) sets mandates for the consumption of renewable fuels in the US. Renewable volume obligation (RVO) indicate the volumes of specific renewable fuel categories.

### **How it Works**

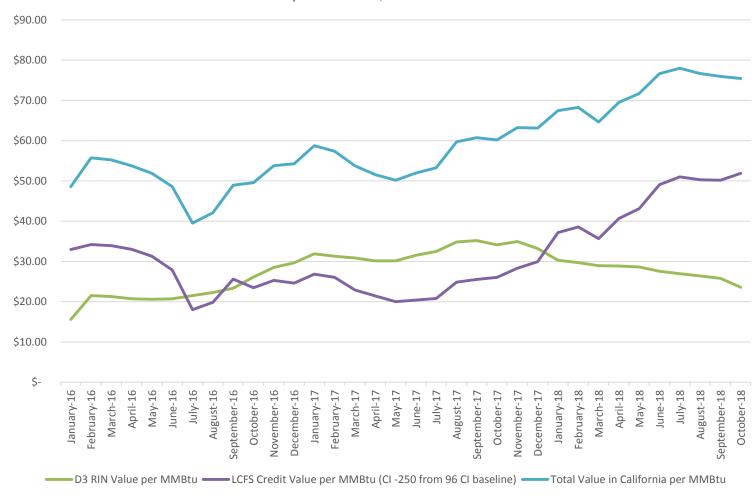
- RINs (Renewable Identification Numbers) are generated by the producer or importer of renewable fuels for each gallon of biofuel produced and reported to FPA
- RINs are then sold to obligated parties (gasoline and diesel producers and/or importers)
- Obligated parties must achieve 36 billion gallons of renewable fuel by 2022.

### Clean Energy Renewables Role

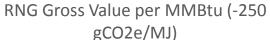
 CER contract, markets and distributes RNG from producers to its vehicle fuel infrastructure, managing the entire value chain with respect to compliance, reporting, generation and monetization of environmental attributes (RINs and/or LCFS credits)

## Historical RNG Value per MMBtu

RNG Total Value per MMBtu, 2016-2018 based on -250 CI



## RNG Gross Value per MMBtu

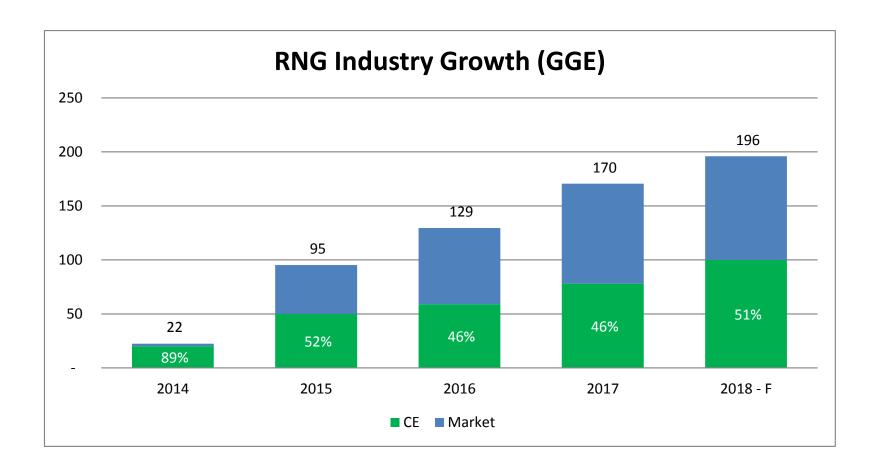




### **Assumptions:**

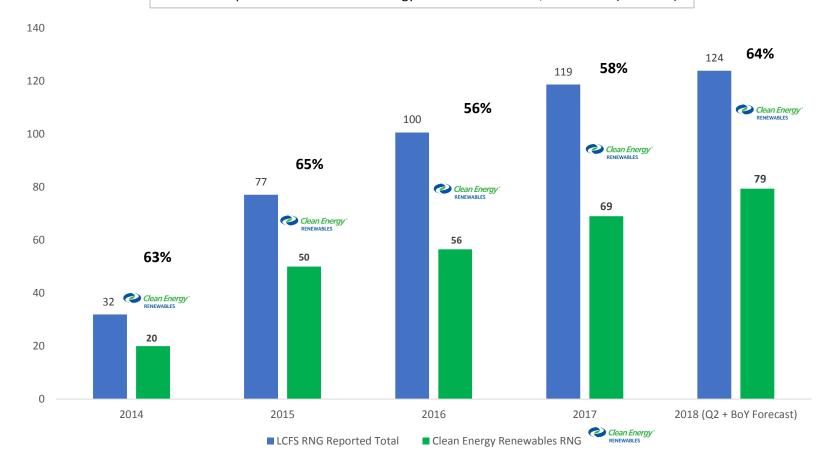
- \$190 LCFS credit price
- \$1.90 D3 RIN
- \$3.00 natural gas commodity

## National RNG Market Leader



## California RNG Market Leader

LCFS RNG Reported Totals vs. Clean Energy Renewables CA RNG, 2014-2018 (MM GGE)



## Zero Now Financing

Run a next-generation natgas fleet. Pay a last-generation diesel price.

You can now lease or purchase a new natural gas fleet for the price of a diesel fleet with Clean Energy's **Zero Now Financing.** 

Not only will you be running the cleanest rides on the road at no additional cost, we'll even guarantee a fuel price significantly lower than diesel through the term of the lease or purchase.

## ZERONOW FINANCING



# Zero emissions trucking. Zero added cost.

### Zero Added Expense

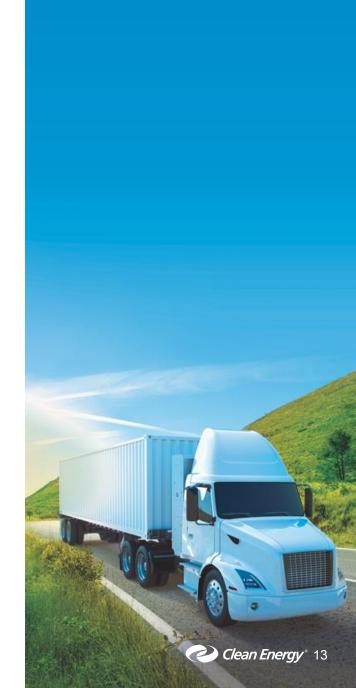
With Clean Energy's Zero Now Financing the lease or purchase of a natural gas fleet is now on par with a diesel fleet. You can choose from a variety of manufacturers, as long as the trucks are equipped with the new Cummins Westport ISX12N engine.

### Discounted Fuel

**Clean Energy** will also guarantee a fuel price for the new trucks that is significantly discounted to diesel for the term of the lease or purchase.

### **Grant Funding**

Clean Energy will also work with customers to obtain any available grant funding that could make the switch to natural gas even more affordable.





## Zero emissions trucking. Zero added cost.

### **Extensive Fueling Network**

**Clean Energy** operates over 110 natural gas fueling stations which can accommodate Class 8 trucks and are placed strategically around the United States and Canada, with plans to open additional locations in the future.

### **Extended Warranty**

**Zero Now Financing** offers a five-year warranty on the **Cummins Westport ISX12N** engine.

### **CNG** or **LNG**

You have the option of choosing either **CNG** or **LNG** vehicles, and **Clean Energy** will also make its **Redeem**<sup>™</sup> renewable natural gas available for **CNG** or **LNG** trucks wherever possible.







## Zero emissions trucking. Zero added cost.

### Cleanest Engine

The new Cummins Westport ISX12N engine is certified by both the EPA and the California Air Resources Board to meet the lowest nitrogen oxide (NO<sub>x</sub>) emission standards at only 0.02 g/bhp-hr. That means the ISX12N engine emits at least 90% fewer pollutants than even today's newest diesel engines, making it the cleanest engine available for heavy-duty trucks. In fact, the new engine has tested as low as 0.01 g NO<sub>x</sub>/bhp-hr., achieving virtually zero tailpipe emissions—all while proving to have the same power, torque, and reliability as its diesel counterpart.



#### Cleanest Fuel

**Redeem**<sup>™</sup> is a 100% American-made, renewable natural gas (RNG)—the cleanest fuel in the world. When paired with the **ISX12N** engine, it creates a certified zero emissions solution.

### Greenhouse Gas Reduction

**Redeem<sup>™</sup> RNG** allows customers to achieve a reduction in greenhouse (GHG) emissions by 70% versus diesel, and in some cases even by over 100%.

Redeem™

by Clean Energy®







www.CleanEnergyFuels.com









Thank you