

# RENEWABLE DIESEL (RD99) NEXDIESEL

Northern California Clean Technology Forum  
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»NEXGENFUEL



CLEAN FUEL HAS NEVER BEEN THIS EASY

# WHAT IS RENEWABLE DIESEL?

- Renewable Diesel is an ultra clean burning, sustainable, petroleum-free “drop-in” replacement fuel for diesel engines.
- Renewable Diesel is also referred to as Hydrogen-derived renewable diesel (HDRD). It is considered a second generation alternative diesel fuel.
- Renewable Diesel is a pure paraffinic hydrocarbon. It does not have any aromatics, oxygen or sulfur, all of which cause increased emissions.
- Renewable Diesel can be made from any vegetable oil, animal fat, waste vegetable oil, grease, etc.

# BENEFITS OF RENEWABLE DIESEL

## DROP-IN FUEL

- Use “Neat” or Blended
- Chemically identical to petroleum diesel
- No Need For Infrastructure or Fuel System Changes
- Meets ASTM D975 & CARB Diesel Specifications

## PREMIUM QUALITY

- For Use In Any Diesel Engine in Place of Petroleum-Based Fuels
- Very High Cetane Number (70-90)
- Very Stable. Store Over Long Periods Of Time Without Quality Deterioration

# BENEFITS OF RENEWABLE DIESEL

## REDUCE EMISSIONS

- Reduces CO2 emissions by 65 - 90% over petroleum diesel
- Particulate Matter (PM) 33%
- Nitrogen Oxides (NOx) 9%
- Carbon Monoxide (CO) 24%
- Hydrocarbons (HC) 30%CV

## EXCELLENT COLD WEATHER PROPERTIES

- -20C Cloud point means no gelling issues

# RENEWABLE DIESEL WON'T VOID ENGINE WARRANTIES

- Renewable Diesel is chemically identical to petroleum diesel.
- Renewable Diesel meets the diesel standard, ASTM D975, as well as all engine manufacturer fuel specifications, therefore it does not void any manufacturer's engine warranty.

# SAMPLE OF FLEETS CURRENT USING RENEWABLE DIESEL

## PUBLIC

- State of California
- City & County of San Francisco
- City of Oakland
- City of Walnut Creek
- San Jose Unified School District

## PRIVATE

- Google Bus Fleet
- Central Concrete
- Greenwaste
- UPS

# RENEWABLE DIESEL FOR OFF-ROAD VEHICLES

- Can be used in any type of off-road equipment to significantly lower emissions, especially beneficial for older equipment
- Fully fungible
- No retrofitting of engines
- No additional infrastructure
- No storage stability problems

# FUTURE FUELS: RENEWABLE GASOLINE & PROPANE

Finding a suitable Renewable Gasoline alternative is more challenging than Renewable Diesel, which is a fully “drop-in” fuel. Unlike diesel, Gasoline is a blend or mixture of different chemical components to achieve the desired gasoline specification, which changes throughout the calendar year. There are alternative fuels that can run in existing gasoline engines but they do not meet the gasoline ASTM standard specification. Therefore, for those fuels to be used, new standards would have to be created as well as OEM engine approvals, gasoline dispensing equipment certification, EPA approval, etc.

Some of these second generation “gasoline-like” fuels are Bio-Butanol, Bio-Isooctane, and Renewable Gasoline byproduct of RD process. None of these fuels can currently be used in an existing gasoline engine as a “drop-in” fuel but NEXGEN Fuel is developing a blend of these fuels with the goal that the end product will meet the gasoline ASTM standard.

Renewable Propane is a by-product of manufacturing Renewable Diesel. Therefore, if a Renewable Diesel manufacturing plant is built in California or nearby, then Renewable Propane would be available in the marketplace.



# » NEXGEN FUEL

NEXGEN Fuel was formed to identify next generation alternative fuels and bring those fuels to the marketplace. Renewable diesel is the first fuel that NEXGEN has brought to the market and it sells under the brand, NEXDIESEL.

NEXGEN Fuel is working on bringing a renewable gasoline substitute to the marketplace. There are numerous options for a renewable gasoline substitute but all options are currently in the test phase or early commercialization stage, which means production scale up is necessary.

NEXGEN Fuel is working on bringing Renewable Propane to the marketplace. Renewable Propane is a product that is currently being manufactured in Europe but the economics do not support bringing that fuel to California at this time.



# GOLDEN GATE PETROLEUM

Golden Gate Petroleum is one of the largest petroleum and biofuel distributors in the Western United States. The company was founded in 1946 in San Francisco, CA. The company is currently headquartered in Martinez, CA.

Golden Gate Petroleum has consistently been a leader in bringing new alternative fuels to the marketplace. Golden Gate started distributing biodiesel in 1996 and grew to be one of the largest biodiesel distributors in the US.

In early 2013, Golden Gate continued the tradition of bringing new alternative fuels to the market by beginning to distribute Renewable Diesel. Golden Gate was the first company globally to focus on the distribution of RD99 as a drop-in replacement fuel versus it being a blend stock into petroleum diesel. Since 2013, Golden Gate has delivered over 60 million gallons of RD99 to our customers with tremendous success.

# HOW CAN GOLDEN GATE PETROLEUM HELP?

Contact Golden Gate Petroleum to become petroleum-free in your fleet, while using the highest quality, cleanest burning diesel fuel.

Pat O'Keefe,  
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& CEO/President of Nexgen Fuel

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Call: 1 (800) 244-4516

The background of the slide is a blue geometric pattern composed of many small triangles. The pattern is lighter and more faded at the top and bottom edges, and becomes more vibrant and detailed towards the center. The text "THANK YOU" is centered in the white space between the top and bottom patterned bands.

**THANK YOU**