

Biodiesel & Renewable Diesel

- Delivering Emissions Reductions NOW

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8.25.21



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Safe Harbor Statement

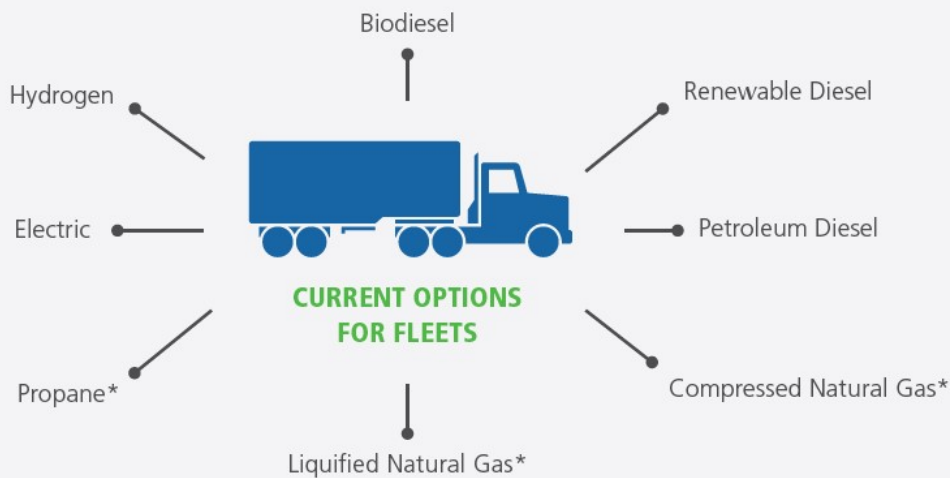
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This presentation reports Adjusted EBITDA, a non-GAAP financial measure. A reconciliation of Adjusted EBITDA to net income, the most comparable GAAP measure, is provided in the Appendix to this presentation.

Integrated Energy Management

- A comprehensive strategy in which fleet managers consider all available fuel sources and adopt all options that best meet their needs.

ENERGY SOURCES AND CONSIDERATIONS



*Fossil based and bio

Benefits



Timeline For Success

- Transition away from fossil fuels now



Sustainability Goals

- Achieve goals now with compounding affect



Energy Diversification

- Fleets are less susceptible to energy source disruption



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REG At A Glance

20+

YEARS

of biodiesel
industry
leadership

505

MMGY

Nameplate
capacity



FUEL LINEUP

Biodiesel,
renewable diesel,
ULSD, blended
fuel, more



**DEDICATED
SERVICE**

and technical
support

REG Competitive Advantage

CAPABILITY

- Feedstock flexibility
- Meet stringent customer specs
- Production, technical and logistics expertise

REG



2020 REG Carbon Saved



4.2 MILLION
METRIC TONS
OF CARBON REDUCTION¹

FROM 519 MILLION GALLONS OF BIOFUELS PRODUCED IN 2020

EQUIVALENT TO



GHG EMISSIONS FROM

10.4 BILLION
MILES

DRIVEN BY AN AVERAGE
PASSENGER VEHICLE²



CO₂ EMISSIONS FROM

4.6 BILLION
POUNDS

OF COAL BURNED²



CO₂ SEQUESTERED BY

5.5 MILLION
ACRES

OF U.S. FORESTS
IN ONE YEAR²



CO₂ EMISSION REDUCTION FROM

1.7 MILLION

PASSENGER ELECTRIC VEHICLES
ON THE ROAD IN ONE YEAR³

(1) Carbon reduction based on life cycle analysis of REG-produced fuels versus petroleum diesel.

(2) epa.gov/energy/greenhouse-gas-equivalencies-calculator

(3) Assuming annual travel of 11,484 miles/year and national grid average electricity versus gasoline using CA-GREET

Carbon Reduction Now

➤ In less than a decade ...

- Biodiesel has reduced the carbon footprint in the United States transportation sector by 120.9 million metric tons¹
 - Equivalent to:
 - CO₂ emissions from 133.2 billion pounds of coal burned²
 - Carbon sequestered in one year by 157.9 million acres of U.S. forests²



Timeline For Success

- Transition away from fossil fuels now



Sustainability Goals

- Achieve goals now with compounding affect

➤ Reducing emissions now has a cumulative effect, leading to greater reductions over time

- The CO₂ emissions from burning fossil fuels do not disappear after one year ... they accumulate!
- Based upon a 10 year half life analysis, the cumulative CO₂ emissions reductions over the past decade exceeds 450 million metric tons³
 - Equivalent to:
 - CO₂ emissions from 495.8 billion pounds of coal burned²
 - Carbon sequestered in one year by 587.7 million acres of U.S. forests²

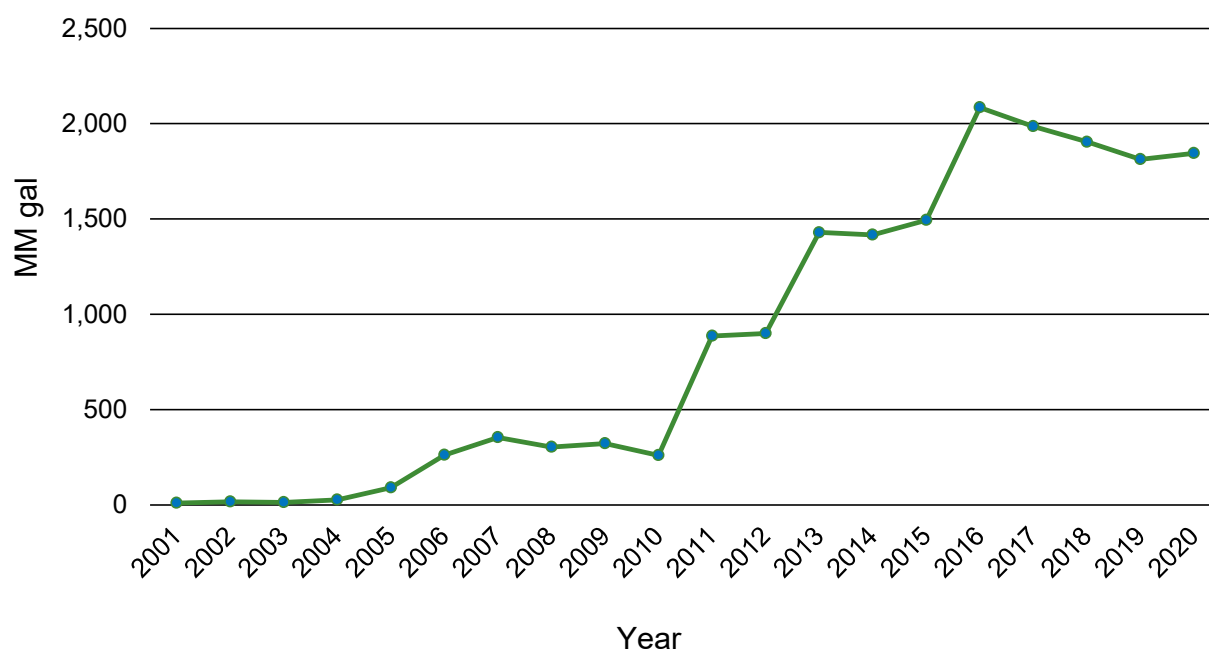
¹Source: Biodiesel.org/emissions-calculator

²Source: epa.gov/energy/greenhouse-gas-equivalencies-calculator

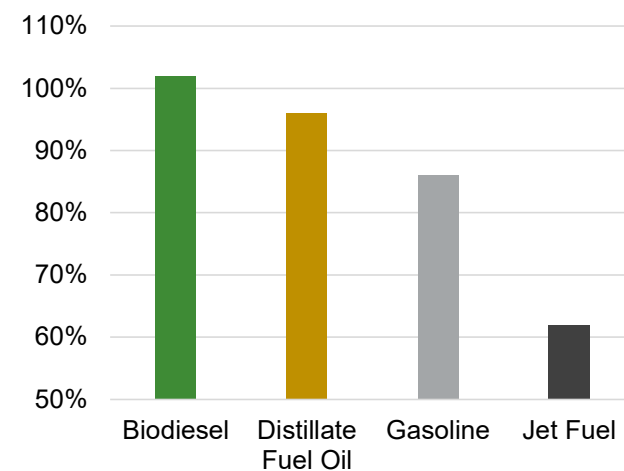
³REG internal calculation

Biodiesel of Today

Historical Biodiesel Consumption



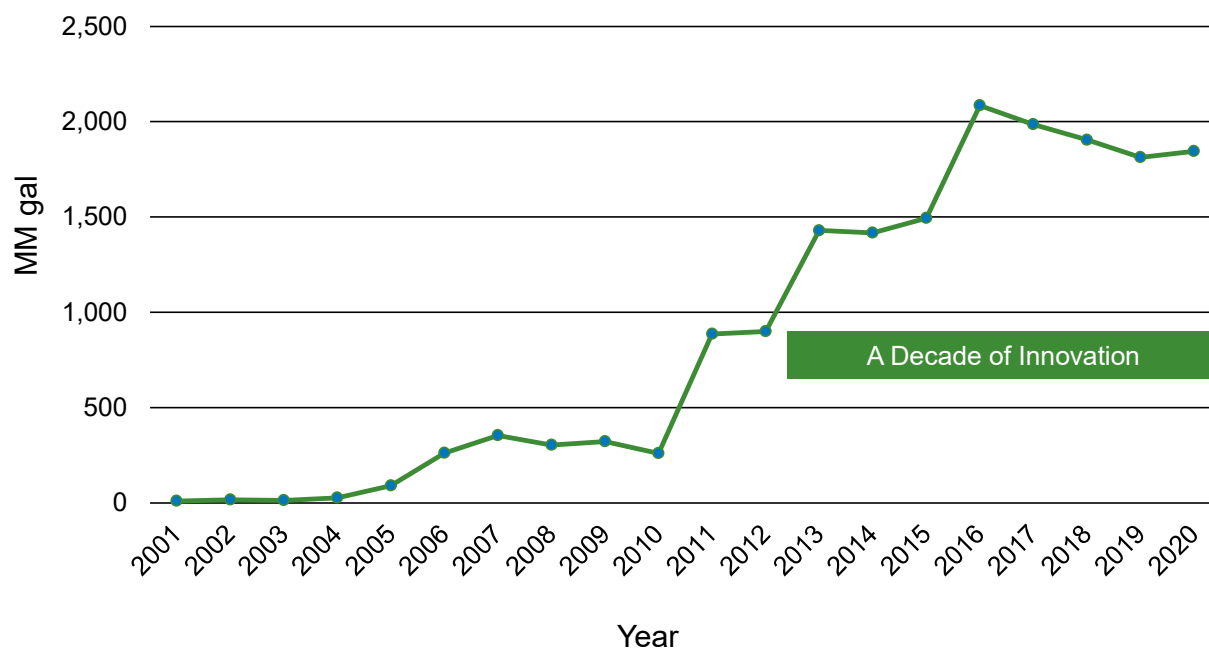
2020 Consumption by Fuel Type
as a Percent of 2019



Source: U.S. EIA/Monthly Energy Review February 2021

Biodiesel of Today

Historical Biodiesel Consumption



- Stringent ASTM quality standards
- BQ-9000® accreditation program
- Certificate of Analysis (CoA)
- Biorefinery design modifications
 - Feedstock flexibility
 - Recycling
 - Increased finished fuel per pound of feedstock yield
- Distilled biodiesel
- Carbon footprint reduction

Source: U.S. EIA/Monthly Energy Review February 2021

BIODIESEL BASICS



➤ WHAT IS BIODIESEL?

A renewable fuel made from various vegetable oils and animal fats



TRANSESTERIFICATION REACTION

Performance Stays Strong With Biodiesel



Drop-in fuel

ASTM CETANE MINIMUM

47

Biodiesel



40

Diesel

2%

Biodiesel

= 2x

More Lubricity
improvement
than additives



Meets stringent
ASTM specs



“When we switched to biodiesel there was zero degradation in fleet performance. It was a huge success.”

—Vince Buonassi, G&D Integrated



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Biodiesel Helps at the Molecular Level

➤ Oxygenated fuel, which means:

- Reduced engine emissions
 - Sulfur, carbon monoxide, hydrocarbons, and particulate matter
 - Oxygen in fuel molecules helps the engine burn fuel more completely (instead of dumping energy out the exhaust)
- Unsurpassed lubricity
 - Excellent for ULSD and Renewable Diesel
 - No lubricity additives needed with B2 or higher blends

➤ Safety requirements for transport & handling are comparable to vegetable oil

➤ Can be blended at any level with any diesel, including Renewable Diesel

- 20% is a common blend level for general purpose use
- Higher quality biodiesel performs better in blends with Renewable Diesel
 - Canadian CSFBT test helps BD/RD blends

➤ Benefits of BD and RD are synergistic

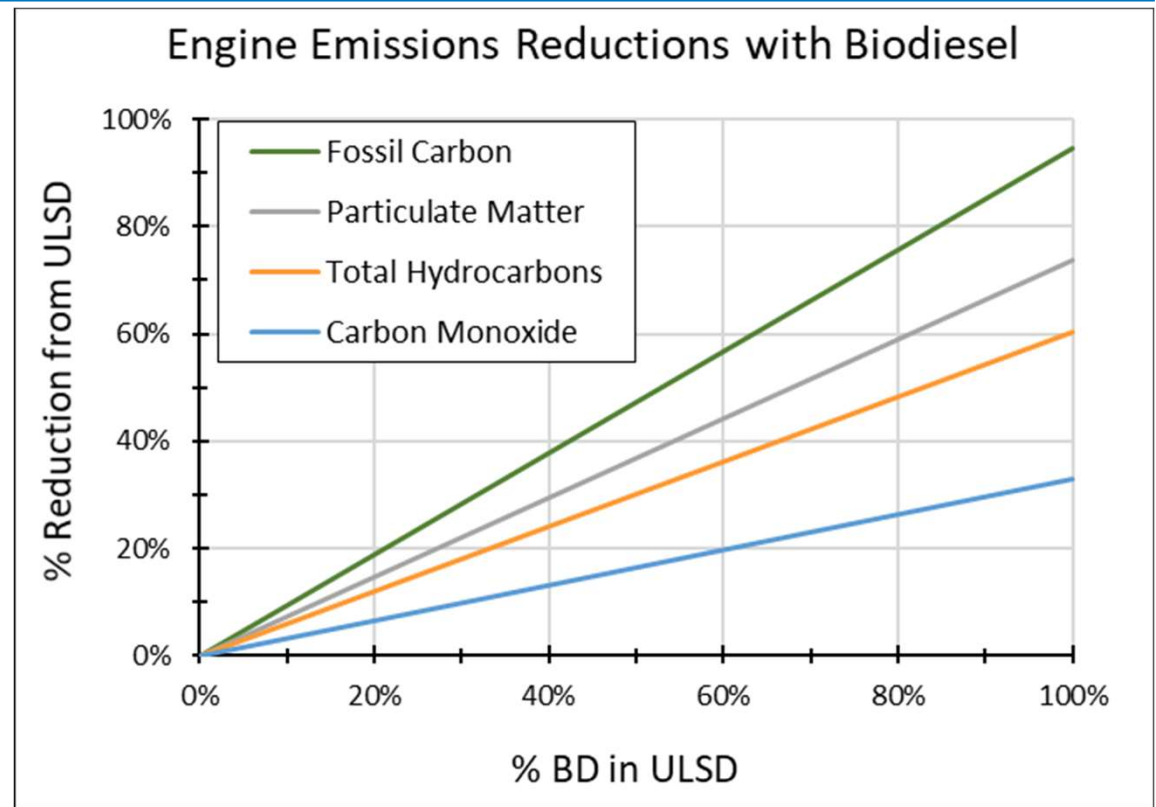
- BD provides lubricity, density, & elastomer swell
- RD provides NOx reduction & cetane
- BD/RD blends can have lower Freezing Points than straight RD



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Substantial Emissions Benefits With BD

- Benefits are proportional to the amount of biodiesel used
 - Reduce DPF regenerations in modern engines
 - Reduce tailpipe emissions from older engines
- GHG reductions help meet sustainability goals – for the lowest possible price
 - Lowest “cost of carbon reduction” of any diesel application
 - BD cost advantage varies by market
 - Iowa, Illinois, Texas, Oregon, California, BC, & Ontario are notable

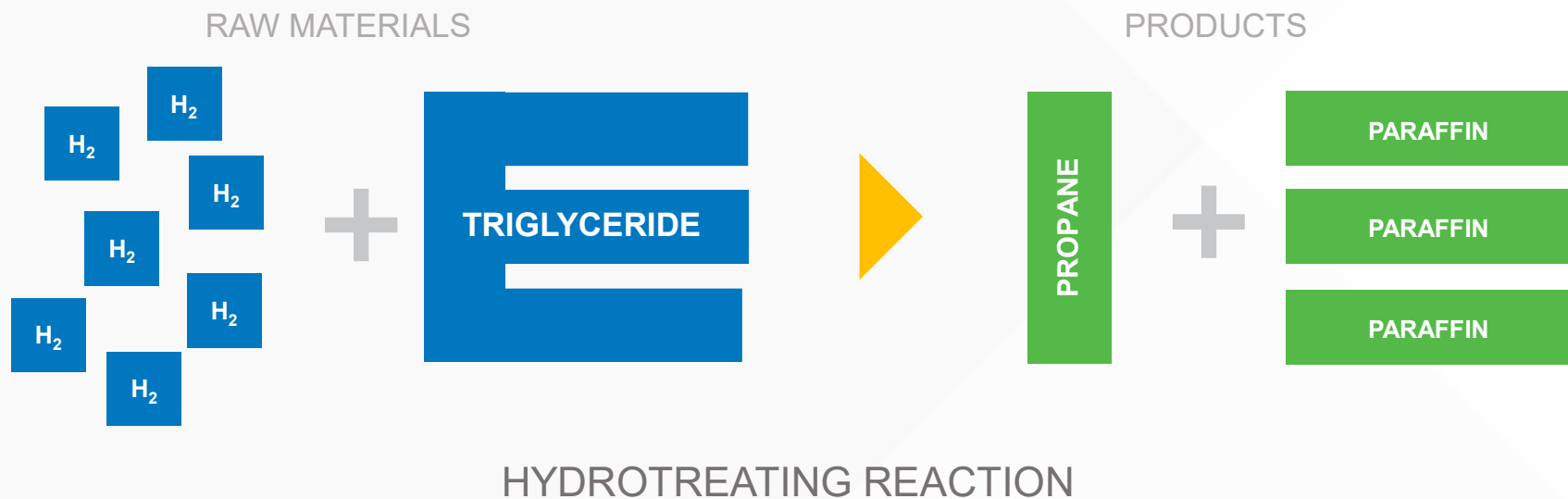


RENEWABLE DIESEL BASICS



WHAT IS RENEWABLE DIESEL?

A renewable fuel composed of **hydrocarbons** that is made from biological oils and fats (**triglycerides**) by **hydrotreating**



Benefits of Renewable Diesel

➤ Paraffinic fuel, which means:

- Exceptional Cetane number
 - Greater than 65 (Federal diesel specification limit is 40)
 - Cetane number is an indicator of combustion quality
- Reduced engine emissions
 - NOx in particular
 - Also carbon monoxide and particulate matter
 - Virtually no sulfur

➤ Desirable Cloud Point

- Cloud Point typically less than -10 °C
- Winter pipeline spec limits for diesel are around -10 °C (summer diesel is higher)

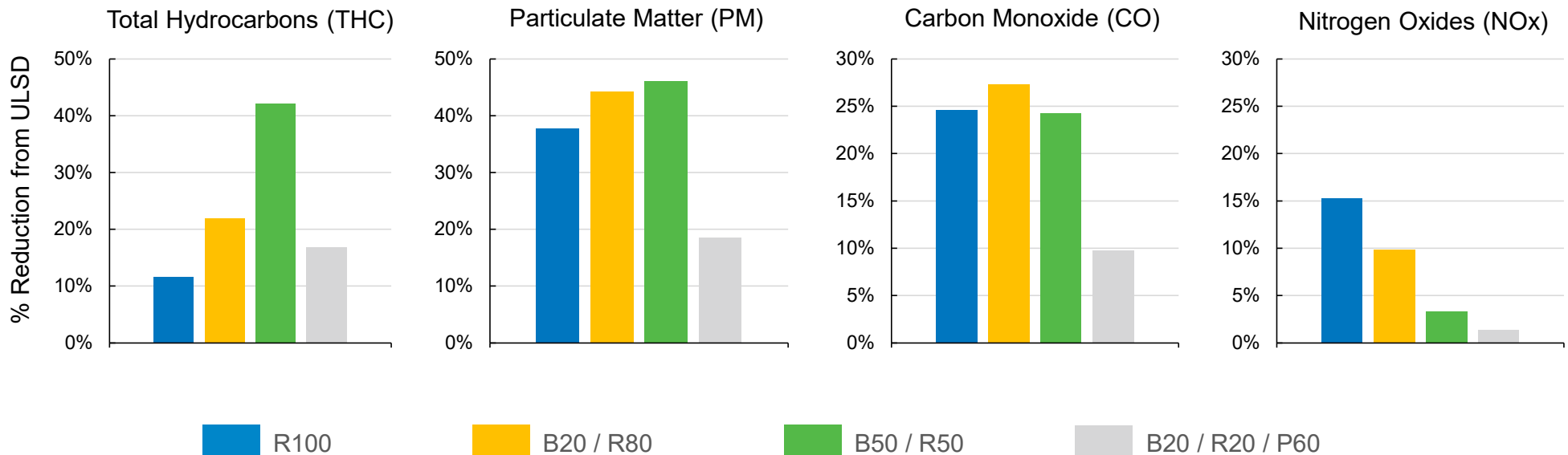
➤ Can be blended at any level with diesel and biodiesel

- NOTE: straight RD is not the same as petro diesel, in spite of marketing claims that it is
- Some equipment manufacturers have a 50% maximum RD inclusion currently
- Components that are absent (aromatics, in particular) have significant impacts
 - Notably: elastomer compatibility, density, and Freezing Point
 - Also additive compatibility & effectiveness
- Biodiesel helps mitigate the chemistry differences
 - Can compensate for the missing aromatics
 - But without the toxicity and environmental concerns



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CARB Emissions Data

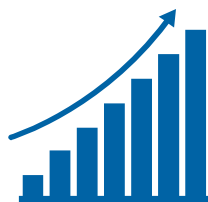


Source: REG charts based on California Air Resources Board assessments compared to federal ULSD

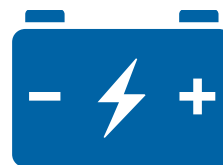
A Simple Step Today For Cleaner Air Tomorrow



Transportation
top contributor to
GHG emissions



Emissions
accumulate in the
atmosphere



Waiting for future
technology is
doing harm



Biomass based
diesel – A simple
step to reduce
emissions right
now

Thank You!

Production And Distribution



45+
TERMINALS

12
BIOREFINERIES

**DELIVERED
PRODUCT TO:**

45
STATES

6
CANADIAN PROVINCES

10
COUNTRIES



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The Case For Biodiesel & Renewable Diesel

➤ Performance

- “B20 performed very similar to #2 ULSD in terms of fuel economy, fuel properties, engine oil samples, operation and maintenance issues.” **Purdue University**

➤ Reduced Emissions

- Carbon Intensity Scores¹: Biodiesel = 27, Renewable Diesel = 34.6, Petroleum Diesel = 100.5

➤ Meets stringent ASTM quality specifications

➤ Ease of Use

➤ Customer Experience

- | | |
|---------------------------------|--|
| ✓ Joe Siadak, Diesel Technician | ✓ Scott Balding, Diesel Equipment Instructor |
| ✓ Florida Power & Light | ✓ Iowa DOT |
| ✓ Ruan Transportation | ✓ Washington D.C. Public Works |
| ✓ G & D Integrated | ✓ Fontana Truck Stop Center |
| ✓ California Fuels & Lubricants | ✓ Harvard University |
| ✓ Central Iowa Towing | ✓ S.K. Davison, Inc |
| ✓ City of Ames, IA | ✓ Kum & Go Convenience Stores |

¹Source: Average biodiesel and renewable diesel CI scores in 2019: <https://ww3.arb.ca.gov/fuels/lcfs/lrtqsummaries.htm>.