



#### **Clean Fuels Symposium:** Driving Alternative Transportation

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### **Presentation Outline**

- REG's role in the biodiesel industry
- Current status of REG-9000 biodiesel
- Projected development of biodiesel













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## Renewable Energy Group®

- Began biodiesel production in 1996
- Marketed an estimated 25% of the biodiesel utilized in the United States
- Both a BQ-9000<sup>®</sup> Producer (eight facilities) and BQ-9000<sup>®</sup> Marketer
- ~175 employees
- Headquartered in Ames, Iowa



#### **REG Network of Biodiesel Production**



**REG Ralston** 12 MGY, Startup: 3/2003 Ralston, IA



Iowa Renewable Energy

30 MGY, Startup: 7/2007

Washington, IA

Western Iowa Energy 30 MGY, Startup: 6/2006 Wall Lake, IA



**REG Newton** 30 MGY, Startup: 5/2007 Newton, IA



**REG Houston** 35 MGY, Startup: 08/2008 Seabrook, TX

**REG Emporia** 

Emporia, KS

60 MGY, Startup: TBD



**REG** Danville 45 MGY, Startup: 11/2008 Danville, IL



**REG Seneca** 60 MGY, Acquired: 04/2010 Seneca, IL



**REG New Orleans** 60 MGY, Startup: TBD Destrehan, LA



East Fork Biodiesel 60 MGY, Completed: 11/2007 Algona, IA









(fats, corn, waste greases)









Western Dubuque Biodiesel 30 MGY, Startup: 5/2007 Farley, IA

Low free fatty acid feedstock conversion (soy, canola, refined fats)



SoyMor Biodiesel 30 MGY, Startup: 8/2005 Glenville, MN

ow



## New Orleans Facility Update

- Construction is 50% completed
- On hold currently until debt financing achieved
  - Eligible for GoZone (Gulf Opportunity Zone) bonds to help leverage debt financing
  - All REG equity already invested
- Committed to location due to strategic locations with petroleum refiners
- Expect biodiesel in 2011



#### National Infrastructure (Production & Terminals)

Renewable Energy Group<sup>®</sup> Plant/Terminal Map







#### Biodiesel 101



### Feedstock overview

- Biodiesel can be made from many feedstocks (collectively called triglycerides)
  - Vegetable oils (soy, rapeseed/canola, etc.)
  - Animal fats (pork CWG, beef tallow, poultry fat)
  - Used oils (yellow and brown grease)
- Feedstock should only affect performance properties if biodiesel is made well:
  - Cloud point / CFPP
  - Oxidation stability
  - Cetane number
- Ability to utilize "cocktails" of multiple feedstocks, allows REG ability to maximize positive attributes of each
- Production skill and plant technology, <u>not feedstock</u>, determines biodiesel quality



#### Attribute-Based Marketing of Biodiesel: REG-9000<sup>™</sup>



**REG-9000<sup>TM</sup> product lineup specifications meet or exceed ASTM limits.** 



Blackhawk Biofuels; and Western Dubuque Biodiesel

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## Benefits of biodiesel

- Green jobs
- Reduce dependence on foreign oil
- Support agricultural industry
- Reduce greenhouse gas emissions

- Improve lubricity
- Maintain or improve engine performance
- Reduce harmful diesel emissions



#### Biodiesel Industry Market Drivers: 2010

#### New Market Development

- Heating Oil Market
- Power Generation
- Mining
- Government











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## 2010 Biodiesel Industry Outlook



## **Biodiesel Market Development USA**

800

#### U.S. Biodiesel Grew Rapidly until 2009

- Steady modest growth in US domestic market primarily due to state incentives
- Strong EU demand growth from 2005-2008
- EU import tariff on biodiesel went into effect March 2009, dramatically reducing US export volume
- RFS2: Delayed until Q1, 2010

#### **U.S. Biodiesel Production Thousand Gallons** 750 → Domestic





#### **Biodiesel Market Drivers 2010**

RFS2					
	Biomass- Based Diesel (50% GHG)	Cellulosic Biofuel (60% GHG)	Total Advanced Biofuels (50% GHG)	Total Renewable Fuel Requirement	
2008				9.0	
2009	0.5		0.6	11.1	
2010	0.65	0.1	0.95	12.95	
2011	0.8	0.25	1.35	13.95	
2012	1.0	0.5	2.0	15.2	
2022	1.0 (Bgal)	16.0 (Bgal)	21.0 (Bgal)	36.0 (Bgal)	



### **Biodiesel Economics**

- 80-90% biodiesel gallon = cost of raw materials (feedstocks)
- Transport cost
- RINs value
- B100 vs. B5 pricing



### **REG RINS Management Program**

- RINS assigned to all B99 or B100 gallons
- Customers: be assured that RINS are valid and accurate
- RINS buyback program allows customers to immediately extract RINS value

OR

• REG customers may choose not to take RINS and purchase biodiesel at a slightly discounted price



#### Louisiana Biodiesel Pricing Examples

#### **B100 Pricing**

REG Houston, Delivered (\$0.90 over HO, \$.22 RIN)

B100 Cost	<u>\$1.90</u>
RIN	<u>-\$0.33</u>
Blenders Credit	-\$1.00
	\$3.23
Transportation	<u>\$0.15</u>
<b>Biodiesel Price</b>	\$0.90
April HO	\$2.18

\$2.23 #2 ULSD **Biodiesel Price** \$1.90 **B5 Cost** <u>\$2.21</u>

**B5** Pricing

#2 ULSD Gulf Coast Rack Price as of 4/20/10

w/ 5% REG Biodiesel

\*Pricing and availability are subject to change.

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# Why Partner with REG?

Quality

- REG-9000<sup>™</sup> Product Specifications
- BQ-9000<sup>®</sup> Producers
- Manage cloud point on seasonal basis
- Volume
  - 300+ million gallons of production capacity
  - Technical support
  - Reliable supplier
- Compliance
  - Multiple contract options
  - RINS integrity
  - RINS buyback program
- Financial stability and experienced, knowledgeable team









### Thank You!

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