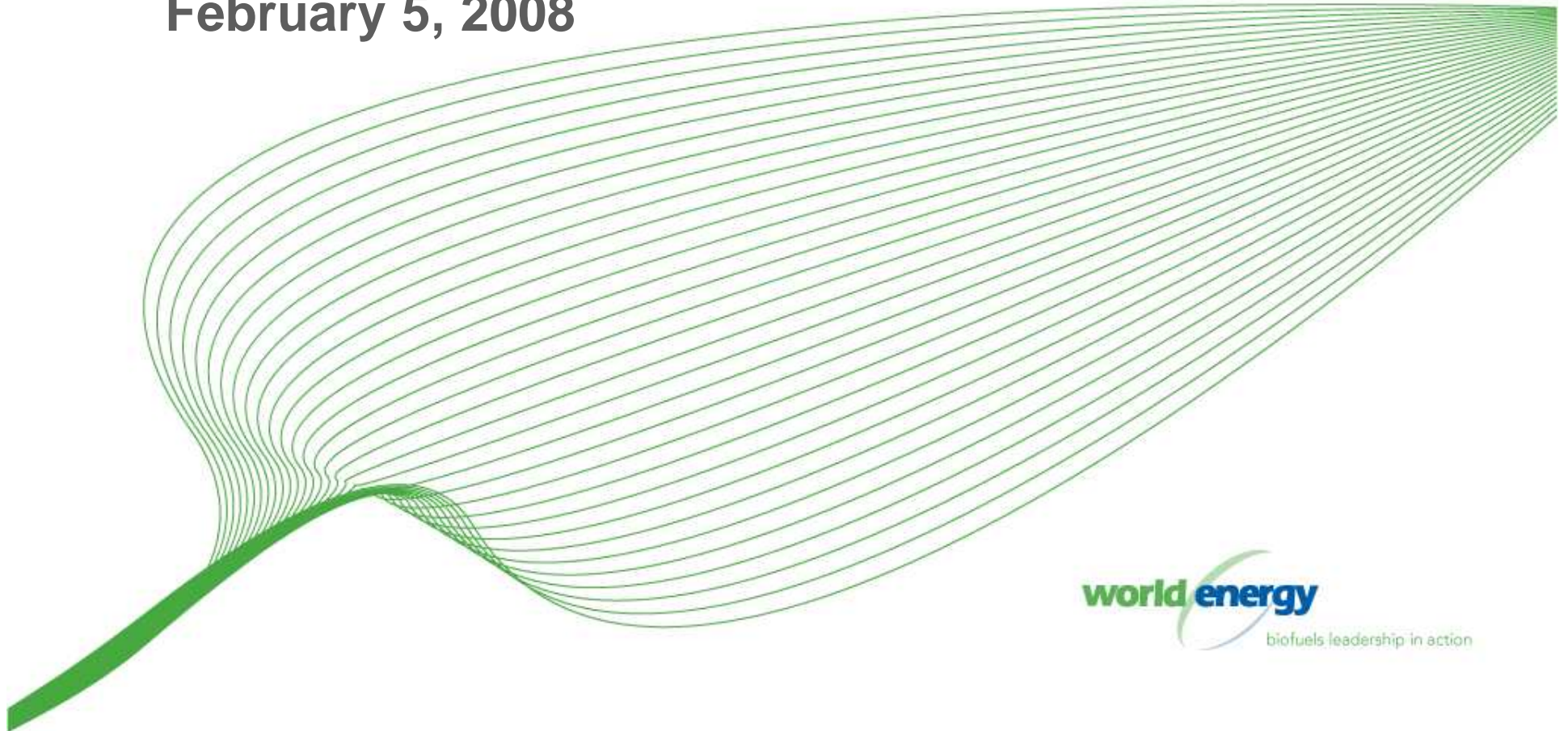


Feedstock Procurement & Risk Management

National Biodiesel Convention & Expo

February 5, 2008



World Energy: A Global Leader



- **10+ years in the US market.**
- **First company to ship internationally.**
- **North America, South America, Europe, and Asia.**



Biodiesel Basics

Feedstock



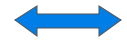
Production



Distribution



Government



Petroleum



Feedstock

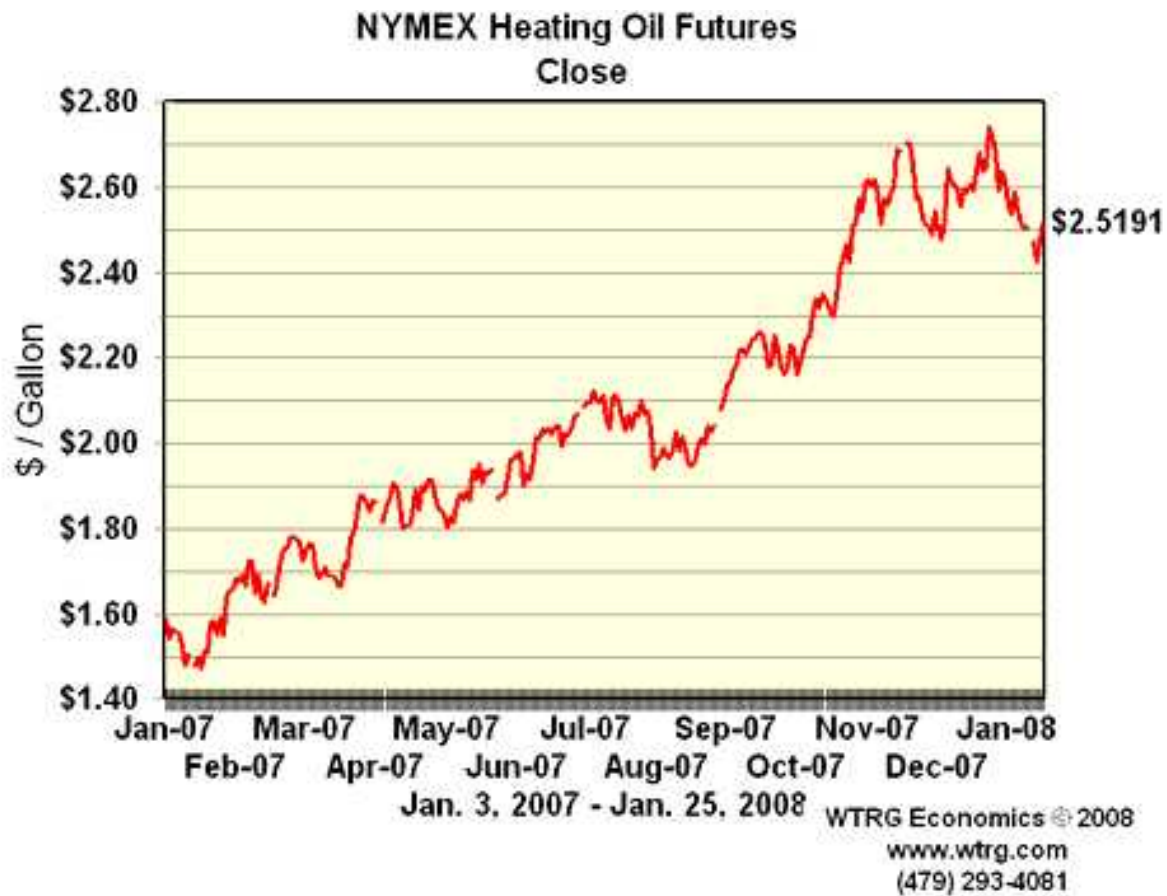
- Soy, canola, palm, jatropha, algae.
- Animal fat, recycled cooking oil.
- Production requires land use.
- Intense competition for feedstock as food or fuel.
- 80% of biodiesel production costs.
- 7.5 pounds soy oil = 1 gallon biodiesel.



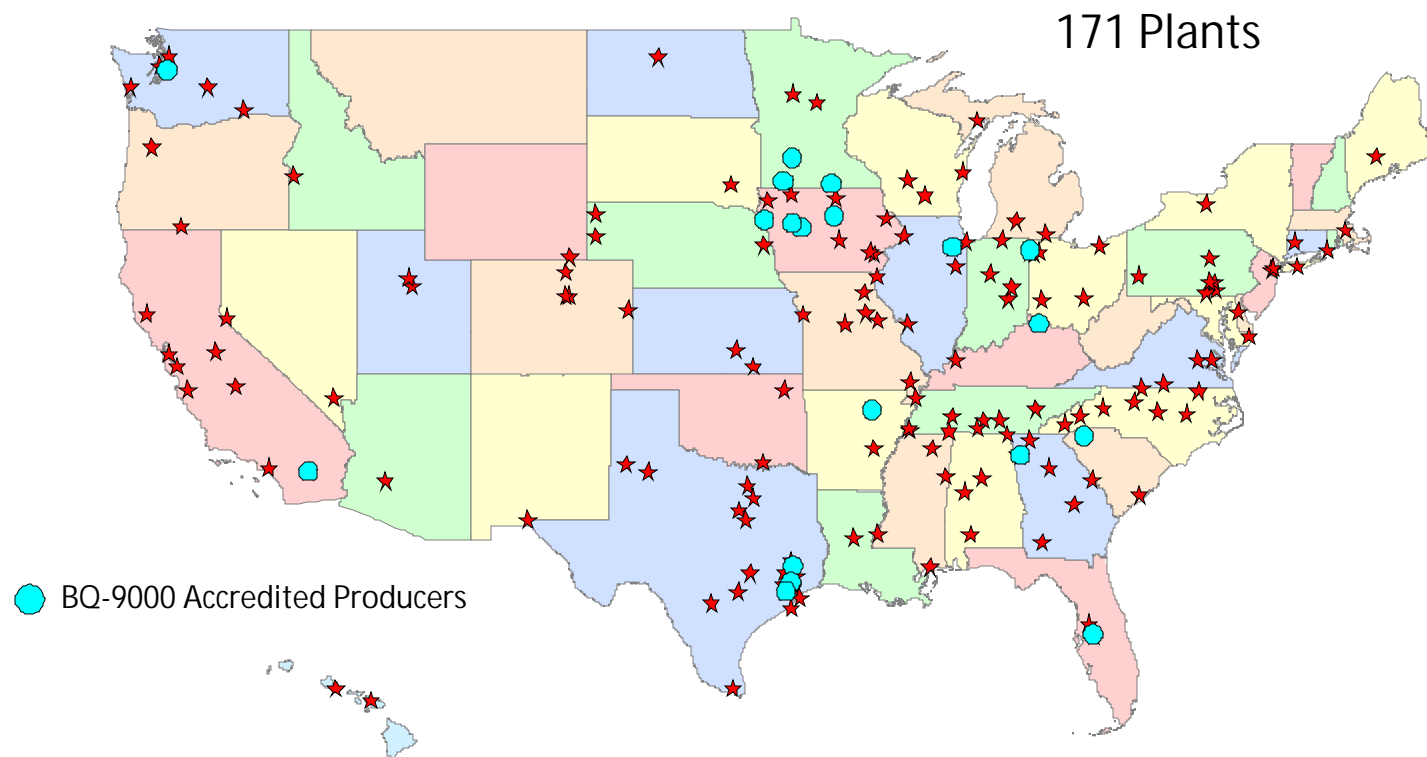
Feedstocks Under Relentless Pressure



\$100 Per Barrel Petroleum?



US Biodiesel Production Capacity To-Date

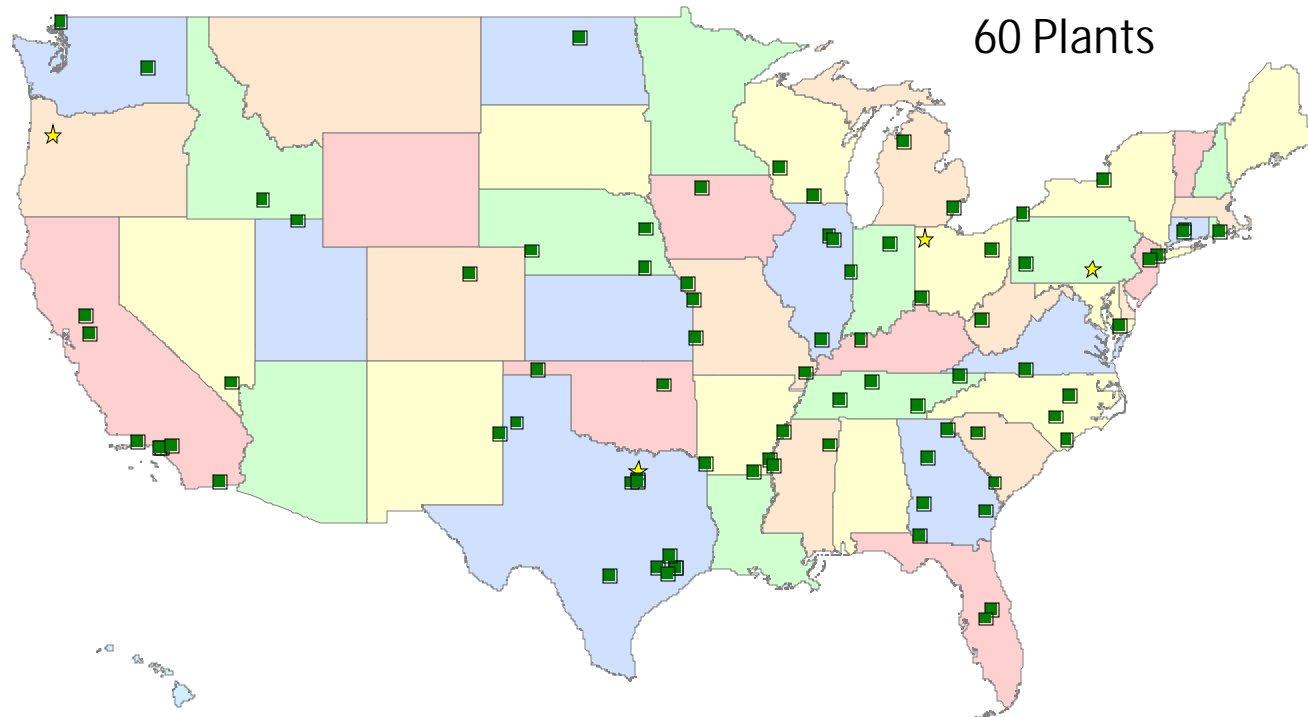


Annual Capacity: **2.24 Billion Gallons**

Source: National Biodiesel Board



New US Plants (Planned or in Construction)



Added Annual Capacity: 1.23 Billion Gallons

Source: National Biodiesel Board



Virgin Vegetable Oil Plants



- **Hedged**
- **Shut down**
- **Losing money**

B 100 Gross Processing Margin

Components	Pricing Date: 01-23-08
RBD Soy Oil Price (\$/lb)	\$0.5168
RBD Cost @ 7.5 lb/gal	\$3.8760
Methanol Price (\$/gal)	\$2.70
Methanol Cost @ 0.112 utilization	\$0.3024
Processing Costs (\$/gal)	\$0.2114
Byproduct Credit (\$/gal) [Glycerin @\$0.070/lb X 0.8530 #/gal]	\$0.0597
Total Transesterification Costs (\$/gal)	\$4.3301
B100 Market Price (\$/gal)	\$4.15
Gross Processing Margin (\$/gal)	\$-0.1801
Change From 01-16-08 (\$/gal)	0.3624

(Jacobsen Upper Midwest Values – January 23rd, 2008)



Three Types of Plants

- **Near feedstock**
- **Near end-use**
- **Niche**



Feedstock Costs

- **CBOT - \$0.5575/lb**
- **Soybean Oil - \$0.58/lb**
- **Canola Oil - \$0.66/lb**
- **Palm Oil - \$0.54/lb**
- **Beef Tallow - \$0.33/lb**
- **Choice White Grease - \$0.315/lb**
- **Poultry - \$0.285/lb**
- **Yellow Grease - \$0.275/lb**



Risk Management: Biodiesel Hedging

- **What hedging is not:**
 - Speculation
 - Profit center
- **Hindsight is 20/20**



Risk Management: Biodiesel Hedging

- **Sample indices**
 - NYMEX HO
 - CBOT
 - ICE Gasoil
- **Risks**
 - Imperfect correlation
 - Margin calls require working capital
- **Goal**
 - “Lock in” acceptable profit margins.



Risk Management: Hedging Basics

- When you buy cash oil, sell equivalent in oil futures or in cash biodiesel.
- When you sell cash oil, buy equivalent in oil futures or in cash biodiesel.
- Maintain a “zero ownership” position (or a pre-determined “long” or “short” position).



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