

Public & Private Efforts to Build a Biodiesel Industry in CT

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Company overview

- Founded in 2004
- Based in Guilford, CT
- Mission: Greenleaf Biofuels will rapidly develop the demand for, and supply of, biodiesel in the northeastern U.S., thus providing a renewable fuel alternative to Americans who value the preservation of our natural environment and the freedoms provided by our national security.



Why are you here today?

- Private citizen
- Business representative
- Government representative



How is biodiesel used?

- Biodiesel is a “drop-in” fuel that can be used in compression-ignition (diesel) engines and oil-fired home heating systems with little or no modifications.
- Biodiesel easily blends with petrodiesel, and is most commonly consumed as a 20/80 mixture (20% biodiesel/80% petrodiesel, aka B20)
- Applications include:
 - On-highway motor vehicles
 - Off-highway agricultural and construction equipment
 - Home heating (bioheat)
 - Marine, rail, power generation



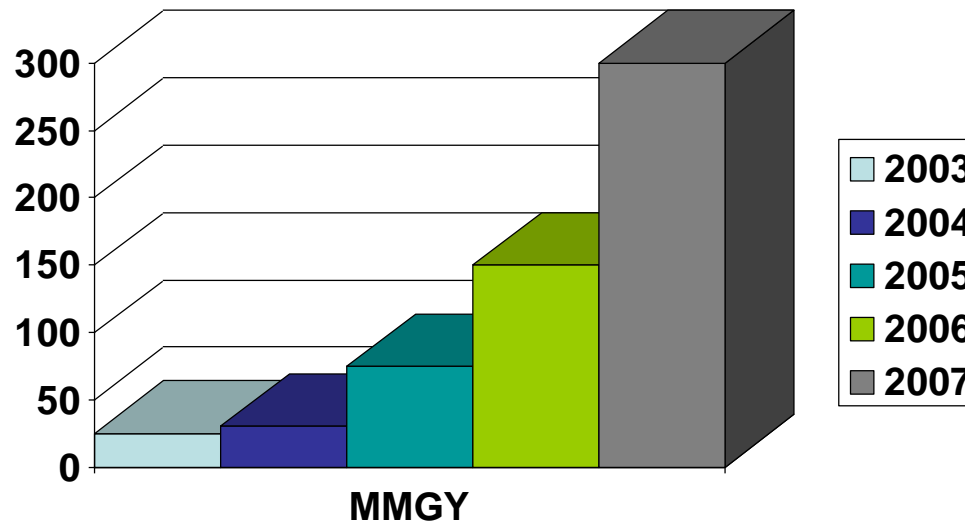
Who is using biodiesel today?

- All branches of the U.S. military – including **U.S. Coast Guard Academy**; USPS; DOA; GSA
- State fleets - including **Connecticut DOT**, New Jersey DOT, Missouri DOT
- Municipal fleets - including the **Town of Glastonbury**; City of Keene, NH; Clark County Public Works Department, Vancouver, WA; City of St. Louis, MO; Hennepin County, MN; Arlington County, VA
- School bus fleets, including Warwick Public Schools, RI; Chicago School Transit, IL; Medford School District, NJ; Deer Valley School District, AZ; St. Johns Public Schools, MI
- Private fleets, including Alcoa, Florida Power & Light Company, Clif Bar, L.L. Bean, New Belgium Brewery, Fetzer Vineyards, Jones Soda Co., Georgia Power
- U.S. National Parks, including Yellowstone and Channel Islands
- Marine vessels, including Western Prince Whale & Wildlife Tours, Seattle, WA



U.S. Biodiesel Production

- 47 biodiesel plants = 400MMGY; 7 under expansion = 53MMGY; 27 under construction = 320MMGY capacity
- Massive build-out of capacity in '06 and '07: over 60 proposed plants in various stages



Impact on U.S. Economy

Economic Contribution of Biodiesel by Industry 2006-2015

Industry	Spending (Mil 2005\$)	GDP (Mil 2005\$)	Impact Earnings (Mil 2005\$)	Employment (Jobs)
Construction	\$807	\$1,519	\$849	11,720
Annual Operations				
Feedstocks	\$6,413	\$13,539	\$4,557	23,715
Industrial chemicals	\$589	\$1,085	\$418	1,624
Electric, natural gas, water	\$276	\$448	\$181	685
Maintenance and repair	\$57	\$84	\$54	282
Business Services	\$47	\$97	\$42	210
Earnings paid to households	\$259	\$332	\$168	866
Subtotal	\$8,448	\$17,104	\$6,268	39,102
Plus Value of biodiesel output				
Biodiesel		\$6,738		
Co-products (glycerin)		\$159		
Total		\$24,001	\$6,268	39,102



Impact on U.S. Economy

- **Aggregate Economic Benefit:** America's biodiesel industry will add \$24 billion to the U.S. economy between 2005 and 2015 Biodiesel production will create a projected 39,102 new jobs in all sectors of the economy
- **Oil Dollars Stay in America:** \$13.6 billion (2005 dollars) will remain in the U.S. economy instead of being sent abroad to finance oil imports
- **Permanent Impacts:** The biodiesel industry will add \$15.6 billion (2005 dollars) to America's Gross Domestic Product (GDP) as it spends \$7.6 billion (2005 dollars) on goods and services between 2006 and 2015



Impact on U.S. Economy

- **Construction Investments:** Biodiesel producers will invest nearly \$810 million (2005 dollars) by 2015 to build new biodiesel plants and expand existing facilities
- **Benefits to the U.S. Treasury:** The industry will generate \$8.3 billion of new revenue for the Federal Treasury for a positive net balance of \$4.8 billion.



Available Market: Connecticut

- Biodiesel is a direct substitute for middle distillate fuels
- 3.1 billion gallons of petroleum is consumed in CT each year
- 1 billion gallons of that is distillate fuel
 - 580 million gallons of home heating oil
 - 240 million gallons of on-highway diesel
 - 180 million gallons of off-highway diesel



Energy Security

- Surging national, regional and local interest in energy independence
 - 1.6 billion gallons of CT's 3.1 billion gallon annual petroleum consumption is imported
 - 1 billion gallons of these imports originate outside the Western hemisphere
 - 320 million gallons originate from the Persian Gulf region (\$530M)



Building a Coalition

- Private businesses
 - CT Biodiesel/Bioheat Association
- State government
 - Governor Rell's Energy Plan
 - Speaker Amman's Fuel Diversification Task Force
 - RGGI: reduction of greenhouse gas emissions – CO₂
 - DEP: reducing particulates, NO_x and Sox
 - UCONN, ECSU and other state universities



State incentives needed!

- Construction grants
- Biodiesel production credits
- Excise tax exemption
- Bioheat personal income tax rebate/credit
- Quality standards and measurements
- Renewable Fuel Standards (MN, WA)



“The use of vegetable oils for engine fuels may seem insignificant today, but such oils may become, in the course of time, as important as petroleum and the coal-tar products of the present time.... Motive power can still be produced from the heat of the sun , always available, even when the natural stores of solid and liquid fuels are completely exhausted.”

- Rudolph Diesel, April 13, 1912 in St. Louis, MO

