

Montana's Biodiesel Journey



Chester MT, 3/07

Department of Environmental Quality
Energy & Pollution Prevention Bureau

**20th EPAC Biofuel Conference
the Biofuel Journey**

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Howard Haines

Bioenergy Program Manager 406 841
5252 hhaines@mt.gov

Ringling MT 8/93



THIS PRESENTATION COVERS

- WHY & WHAT IS BIODIESEL**
- EVOLUTION OF A SOLUTION**
- WHERE ARE WE NOW**
- This panel--**

Ethanol Use (all retail may or may not)

State FY	MGY blend	MGY ethanol
2004	17	2.4
2005	30	3.1
2006	30	3.0
2007	12.6	3.1
2008	40.669	ttl gas 491.90
2009	170.679	other 315.175
2010 (Jul-Apr)	140.150752	ttl 266.254

RFS I

•2022: 110 MGY starch, 25 MGY cellulosic

Proposed Ethanol Plants (Mont)

Permitted	MGY	Feedstocks
1 (expires Jul '10)	59	Wheat, corn, barley
Recently studied		
2	70	Wheat, barley
Total in planning		129 MGY
(for ref July 2008 was 383 MGY)		

Operating/planned cellulosic pilot plants
1 **0.15 (Butte, August 2008)**

Biodiesel Use (variable, depends on cost)

State FY	MGY blend	Gal B-100
2004	0.345	70,000
2005	0.347	71,000
2006	0.348	71,149
2007 (thru Nov)	nya	336,180**
2008		946,328
2009		802,759 (t 245.243 mgy)
2010 (thru Apr)		628,157 (ttl 207.931 mgy)

RFS – 1

•2022: 74 MGY (1.8 million acres/year)

Proposed Biodiesel Plants (Mont)

Permitted

MGY

Feedstocks

1

0.1

Canola, camelina

Listed

5 by MDT
(39 in 2008)

0.029

camelina, canola,
Juncea, safflower,
sunflower, algae, other

Total planned 0

(for ref 238.089 MGY in 2008)

Operating (FY 2010)

4

0.015

Used fry oil

1

0.100

Canola, camelina, other

* represented by engineering firms, contacting DEQ

BIODIESEL IN MONTANA

**BIODIESEL IS NOT NEW.
BIODIESEL IS AN
ANIMAL OR PLANT OIL
REACTED WITH A
CATALYST AND
ALCOHOL TO MAKE AN
ESTER USED AS FUEL
MEETING ASTM D6721.**

Montana Biodiesel Journey

- 1973, 1979 diesel fuel disruptions
- 1982 “WHAT TO GROW” by MSU
- 1983 MSU SEMINAR-safflower:
MARKETS: FLEETS, railroads

Montana Biodiesel Journey

- **MARKETS: FLEETS, railroads**
- **1983- BN TECHNICAL CONCERNS**
- **1984-5 MSU (ChE) STUDIES-lube oil**
- **1985-6 MT EASTERN AG RESEARCH**
- **Oilseed lab for high oleic safflower development**

MONTANA Biodiesel Journey

- **1991: MONTOLA** —the “Fuel Safflower”
- **1992 –NDSU ENGINE-EMISSIONS**
- **PRICED FOR HEALTH FOODS**
- **NICHE MARKETS:** Tourism, Underground Mining

MONTANA Biodiesel Journey

- 1993 DEC. NPS-YELLOWSTONE**
- 1994 Truck in the Park Biodiesel
Demonstration proposed**
- TRUCK DELIVERED FEB 2, 1995**
- EMISSIONS TESTS, MARCH 1995 & 1997**

YNP BIODIESEL QUESTIONS

- VISITORS CONCERNS (smoke, odor)**
- EMISSIONS, SAFETY, HEALTH**
- REMOTE LOCATION--BEARS**
- COLD CLIMATE COMPATIBILITY**

EXPANSION OF BIODIESEL PROGRAM

500 gal B100

15,000 gal B100

1000 gal B-20

BIODIESEL IN MONTANA

- REGULATED MARKETS**
- MISSION-DRIVEN MARKETS**
- LOW-BLEND MARKETS (2%)**
- CONTROL OF FUEL PRICE**

BIODIESEL IN MONTANA

- 2001-STUDY CHEAPER FEEDSTOCKS**
- 2003-WORKSHOP ON PRODUCTION**
- 2006-2009 BIODIESEL WORKSHOPS**

BIODIESEL IN MONTANA

2006-2007 BIODIESEL Workshops led to legislative funding of a biodiesel fuel test analysis lab at MSU-Northern

THIS PANEL

- University of Idaho, Brian He, Regional challenges to biodiesel**
- Earl Fisher Biofuels LLP, Brett Earl and Logan Fisher local challenges, local solutions**
- Manning Feraci, NBB, Status of National incentives and production**

FOR MORE INFORMATION

- DEQ web site, www.deq.mt.gov, select “Bioenergy/biodiesel” in drop down
- www.BiodieselEducation.org
- www.energizemontana.com
- www.biodiesel.org
- STORY DISTRIBUTING, BOZEMAN