

Regulatory and Business Issues

Taxes, credits, EPA, NBB, ASTM, BQ9000 and the rest of the alphabet of issues associated with the biodiesel business.

Outline

- State & Federal taxes
- Federal tax credit
- EPA registration
- NBB membership
- ASTM specification
- BQ900 quality assurance program

State & Federal Taxes

On-Road Taxes

- **Any vehicle that is driven on the road, excluding off-road vehicles that cross roads or drive on roads for very brief distances.**
- **Applicable taxes and fees:**
 - **Federal excise**
 - **NC State excise**
 - **NC State inspection fee**
 - **Exempt from NC State sales tax**

Off-Road Taxes

- **Any vehicle or equipment that is not used on a road. Examples are tractors, earth moving equipment, stationary electric generators, and fuel oil burning furnaces.**
- **Applicable taxes and fees:**
 - **NC State inspection fee**
 - **Exempt from Federal excise**
 - **Exempt from NC State excise**
 - **Exempt from NC State sales tax**

Other Taxes

- **Municipal, non-profit, county, or state government agencies are all treated a little differently on taxation. Check with Motor Fuels Division of NC Department of Revenue and the Internal Revenue Service for special rates and exemptions.**

Federal Tax

- If you use biodiesel in an on-road vehicle you are required to pay Federal Excise tax on each gallon you use.
- As of 4/11/05 the applicable tax rate for biodiesel (use the diesel lines) is 24.4 cents per gallon.
- See IRS publication 510 for possible changes
- You need to get an Employer Identification Number (sometimes referred to as a Tax ID Number). File an Application for Employer Identification Number, form SS-4.
- You need to file a Quarterly Federal Excise Tax Return, form 720

NC State Tax

- If you use biodiesel in an on-road vehicle you are required to pay NC State Excise tax and NC State Inspection Fee on each gallon you use.
- The inspection fee goes to the Standards Division of the NC Department of Agriculture who regulates pumps, meters, scales, and fuel quality.
- From 07/01/05 - 12/31/05 the applicable tax rate for biodiesel (use the diesel lines) is 27.1 cents per gallon and the inspection fee is 0.25 cents per gallon.
- You need to file an Application for Biodiesel Provider, form Gas 1262
- You need to file a quarterly Motor Fuels Fuel Alcohol Provider Return, form GAS-1264, for State excise and inspection fee.
- <http://www.dor.state.nc.us/taxes/motor/rates.html>

Motor Fuels Tax Liability Bond

- Provider-Bond-Return
- According to the NC General Statutes, anyone making less than 3,690 gallon of biodiesel per month must file a \$2,000 bond with the State.
- The amount of the bond goes up from there depending on production volume.
- Form Gas 1212
- $2 \times (\text{gallons produced}) \times .271 \text{ cents/per gallon} =$
Bond equals twice your monthly expected average

Tax Forms and Information

IRS SS-4: <http://www.irs.gov/pub/irs-pdf/fss4.pdf>

IRS 637: <http://www.irs.gov/pub/irs-pdf/f637.pdf>

IRS 720: <http://www.irs.gov/pub/irs-fill/f720.pdf>

See IRS publication 510 for changes on federal excise tax

NCDOR Gas 1261: <http://www.dor.state.nc.us/downloads/gas1254.pdf>

NCDOR Gas 1254: <http://www.dor.state.nc.us/downloads/gas1254.pdf>

<http://biofuels.coop/taxes.shtml>

Points of Contact

- **Robert Murphy, Excise Tax Specialist,
IRS:
(803) 981-6869**
- **Patty Thompson, Motor Fuels
Division, NCDOR:
(919) 715-3753**

State & Federal Tax Credits or Incentives

Federal Biodiesel Tax Credit

- Signed into law as part of the American JOBS Creation Act of 2004 (H.R. 4520) by President Bush in October, 2004.
- Effective January 1, 2005, the Act allows credits related to biodiesel fuel.
- For agri-biodiesel, the credit or payment amount is \$1.00 per gallon.
- “Agri-biodiesel”-derived solely from virgin oils and animal fats
- For biodiesel other than agri-biodiesel (second use), the credit or payment amount is \$0.50 per gallon.
- Under the Code’s coordination rules, a claim may be taken only once with respect to any particular gallon of alcohol or biodiesel.
- The incentive is taken at the blender level, meaning petroleum distributors, and passed on to the consumer.
- The tax credits were originally authorized for two years (through the end of 2006); Energy Bill extended credits through 2008

Biodiesel Producer and Blender Registration

- The blender or producer must be registered with the IRS by July 1, 2005. Producers use Form 637, Application for Registration For Certain Excise Tax Activities, and blender use Form 637 with activity letter M.
- Becoming officially registered may take a considerable amount time.
- IRS guidance that 0.1% petroleum diesel blend qualifies (B99.9)
- If a blender has more excise tax credits than excise tax owed, they can receive the excess credit amount back from the IRS as a refund

Certificate for Biodiesel

- Producers and/or blenders must obtain and keep a record of a Certificate for Biodiesel directly from the producer of the B100.
- The Certificate must identify the product as “biodiesel” or agri-biodiesel”, that is properly registered as a fuel with the EPA and that it meets the requirements of ASTM D-6751.
- This certificate a producer creates and provides to the blender
A Certificate of origin not the Certificate of Analysis

Excise Tax Credit for Biodiesel Mixtures

- The credit is against the Federal Excise tax imposed on taxable fuel (24.4 cents per gallon on diesel).
- A mixture means any quantity of biodiesel that is blended into diesel fuel or heating oil (i.e. 1%, 11%, 20%, 50%, 99%, etc.).
- Neat biodiesel (B100) is not eligible for the excise credit.
- Blenders with excise tax liability (i.e. blending biodiesel into undyed diesel) claim the credit on Form 720, Quarterly Federal Excise Tax Return.
- Blenders without excise tax liability (i.e. blending only into dyed diesel) would utilize Form 8849, Claim for Refund of Excise Tax, to make a claim for the mixture credit but because heating oil is exempt from taxation blending biodiesel into it is considered an ineligible activity upon which the blender could claim a credit.

Income Tax Credit for Biodiesel Used to Produce Mixtures

- To the extent that the sum of the biodiesel mixture excise tax credit exceeds a person's liability for any particular quarter, an income tax credit is allowable to the producer of the mixture (the blender).
- B100 distributors are eligible for an income credit if they are delivering B100 directly into the fuel tank of an on-road vehicle that is used in a trade or business.
- **B100 used for personal use does not qualify-**

Available to taxpayer that uses biodiesel in their trade or business or sells biodiesel to an end user

- Can only be taken against income, thus far less attractive than the excise tax credit
- If taxpayer has more credit than liability, no mechanism for refund
- Blenders must use Form 4136, Credit for Federal Tax Paid on Fuels, when claiming an income tax credit.
- 1.00 for agri & 50 cents for second use

Small Agri-Biodiesel Producer Credit

- 2005 Energy Bill created a new credit for "small 'agri-biodiesel' producer" = \$0.10 per gallon
- Small agri-biodiesel producer = 60 mm gal. per year or less annual capacity
- Capacity of all affiliated companies aggregated
- Limited to the first 15M gal., so maximum credit is \$1.5M/yr.
- "Agri-biodiesel" = virgin oils and animal fats
- Sunsets December 31, 2008.

Renewable Fuel Standard (RFS)

- 2005 Energy Bill established Federal RFS based on gasoline consumption
- 4B gal in 2006, raising to 7.5B by 2012
- Ethanol is the primary focus, but biodiesel also qualifies
- Open Issues:– How does biodiesel fit in?
- Refueling station for E85 and B20+ at your home or business, you can earn a 30 percent tax credit

NC Renewable Energy Equipment Manufacturer Incentive

- In North Carolina, the state offers a corporate income tax credit to manufacturers of renewable-energy products and equipment.
- The credit is equal to 25% of the installation and equipment costs of construction, with no maximum limit.
- The entire credit may not be taken for the taxable year in which the costs are paid but must be taken in 5 equal installments beginning with the taxable year in which the costs are paid.
- The credit cannot exceed 50% of the taxpayer's tax liability in one year.
- If the credit does exceed a manufacturer's tax liability, the credit may be carried forward for up to 10 years.
- This incentive can be used in conjunction with the federal corporate tax credit and accelerated depreciation allowances.
- Any amount of a facility's costs provided by federal, state or local grants may not be included in the calculation of the allowable credit.
- <http://www.dsireusa.org/>

Commodity Credit Corp.

- US Department of Agriculture will make payments to producers of ethanol and biodiesel for crop purchases to make biodiesel as part of the Farm Service Agency's Bioenergy Program.
- Eligible crops include: Corn, soybeans, grain sorghum, sunflower seeds, rapeseed, canola, cottonseed, and others
- Rendered animal fats and recycled oils are also included.

CCC Credit

- The fiscal year 2005 appropriations bill approved \$100 million of funding for the Program
- The Program pays the biofuel producer for the calculated bushels of crop used to make the biofuel based on incremental increased production.
- The oilseed crop payment is 40% which is generally at least as much as the oil itself costs
- Payment for rendered grease depends on the relative cost of the grease compared with soybean oil.
- Web site: www.fsa.usda.gov/daco/bio_daco.htm
- CCC historically has provided \$1.00 +/-20 cents per gal.
- Funding questionable come July 2006 due to Excise tax credit extension from the Energy Bill

EPA Registration

EPA registration

- EPA holds strict regulations on engine emissions of CO, unburned HC, NOx, & PM
- All producers of fuels and fuel additives for motor vehicles are required to be registered with the EPA.
- Requirements are authorized by sections 211 (b) and 211 (e) of the Clean Air Act.
- See 40 CFR Part 79
- Detailed information on registration is available at:

<http://www.epa.gov/otaq/fuels.htm>

EPA registration cont.

- Fuels not sold into on-road markets are exempt from 40 CFR Part 79 (EPA reg.)
- To qualify for this exemption, a producer can never provide biodiesel to on-road users/purposes

EPA Fuel and Fuel Additives (F/FA) registration

- All F/FA manufacturers are required to register each product they produce.
- Basic registration data required:
 - Product and manufacturer identification
 - Concentration and purpose-in-use
 - Specific compositional data
 - Total annual production data
 - Marketing distribution data
 - Notification about group participation
 - Notification on the use of special provisions

Penalties for Noncompliance

- EPA will impose civil penalties on any group that fails to comply with requirements of the regulations.
- Fine of \$25,000/violation plus the amount of any economic savings resulting from the violation.
- Each day of offense is a separate violation

Fuel Groups

- Fuels are grouped into 3 categories.
 - Baseline (diesel and gasoline)
 - Non-baseline
 - Atypical

Baseline Fuel Requirements

- 1) Fuel contains only C,H,O,N, and S.
- 2) Fuel contains less than 1% oxygen.
- 3) Fuel contains less than 0.05% sulfur.
- 4) Fuel satisfies ASTM D 975 (conventional petrodiesel specification)
- 5) Fuel is derived from conventional petroleum, heavy oil deposits, coal, tar sands, and/or oil sands.

Biodiesel does not satisfy 2), 4), and 5), so it cannot be considered to be a baseline fuel.

Non-baseline fuel requirements

Must conform to baseline fuel requirements except:

- Fuel may contain more than 1% oxygen.
- Fuel may be derived from other sources than those listed for baseline fuels.

The only requirement keeping biodiesel from meeting the non-baseline classification is that it does not satisfy D 975.

Atypical fuel requirements

- Fuel contains one or more elements other than C, H, O, N, and S.

While biodiesel does not contain other elements (only C, H, and O), EPA treats this category as a catch-all for fuels that do not fit in other categories. Biodiesel is treated as atypical.

The Tiers of Requirement

Tier 1 (~ \$200,000)

- Literature search
- Characterization of emissions
- Exposure Analysis
- The NBB and DOE's Northwest Regional Biomass Energy Program submitted Tier 1 data around the same time
- The DOE's application was rejected because the wrong test engine was used
- The NBB's data was accepted

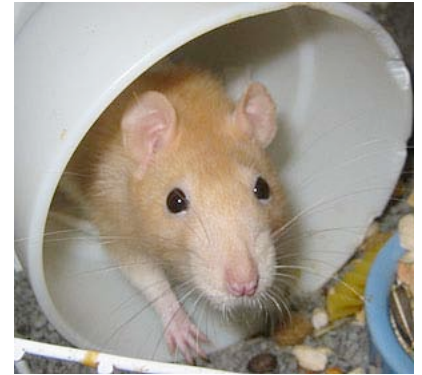
Tier 2 (~ \$2,000,000)

- Testing of laboratory rats for carcinogenicity, mutagenicity, teratogenicity, reproductive toxicity, and neurotoxicity
- The NBB conducted these tests and their data was accepted

Tier 3

- More testing may be required at EPA discretion depending on results of Tier 1 and Tier 2 testing.

The Rats Lived!



- “No pronounced toxicity resulted from the subchronic exposure of rats to biodiesel exhaust emissions at any concentration. Neither mortality nor abnormal clinical observations were attributed to exposure to biodiesel exhaust.”
- “Similarly, there were no adverse ocular responses due to biodiesel exposure, nor was feed consumption affected by exposure. Serological samples from sentinel rats before and after the study demonstrated that the animals were free from infections by common rodent pathogens. “

Small Business Provisions

- Small businesses have < \$50 million in annual sales.
- Small businesses registering products in the baseline and non-baseline categories are only required to submit basic registration data (Tier 1 and Tier 2 are waived)
- Small businesses registering products in the atypical category (biodiesel) must have < \$10 million in annual sales and are required to submit more advanced registration data (at least Tier 1).

Sharing Data

- To ease the burden of testing, EPA allows manufacturers to group together.
- One selected representative is tested and the results are submitted jointly for all members of the group.
- Members of the NBB have access to the EPA test data and thereby are able to register as producers

SVO & EPA

- Clean Air Act of 1990
- Long term durability
- Federal test & certification for SVO kits

NBB: National Biodiesel Board

The NBB's Data

- NBB members have access to the data at no additional charge.
- Non-members must pay \$25,000 plus 1 cent per gallon of fuel produced for access to Tier 2 data.
- Members wishing to leave NBB must pay \$100,000 plus 9% interest from date access is granted.

NBB Membership

- Voting directorship is available to a feedstock producer, feedstock producer organization, a biodiesel processor, or a biodiesel marketer.
- Dues depend on whether you are on feedstock side or biodiesel side.

NBB Dues

- Dues for feedstock producer or producer organization = \$10,000 per year. Several organizations can split the dues but they only receive one vote.
- Biodiesel processor or marketer dues = \$5,000 per year plus a royalty on every gallon produced (see volume dues)

Biodiesel Producer/Marketer Volume Dues

<u>Volume produced or marketed (gallons/yr)</u>	<u>Volume dues</u>
0 to 1,000,000	\$0.01/ gallon
1,000,001 to 5,000,000	\$0.0075/gallon
5,000,001 to 10,000,000	\$0.0050/gallon
10,000,001 to 15,000,000	\$0.0025/gallon
Amounts over 15,000,000	\$0.0010/gallon

Sample Calculation

- Suppose a processor sells 65 million gallons of biodiesel.

$$\begin{aligned} & \$10,000 + \$30,000 + \$25,000 + \\ & \$12,500 \end{aligned}$$

$$+ \$50,000 = \$127,500 \text{ annual dues}$$

NBB Dues:

Small Producer Category

- In July, 2004 the NBB added a new type of non-voting associate membership called the small producer category for those making less than 250,000 gallons per year
- Minimum annual dues = \$2,500 plus 1 cent per gallon produced
- Small producers can credit two years worth of their NBB dues towards certain portions of the BQ9000 certification fees

Quality Standards & Control

BQ9000

- NBB initiating a voluntary fuel accreditation program called BQ9000
- BQ9000 is administered by the National Biodiesel Accreditation Commission, an autonomous committee of NBB
- This quality assurance program involves ISO 9000–type inspections (paid for by producer) and periodic fuel testing.
- The quality systems program includes: storage, sampling, testing, blending, shipping, distribution and fuel management practices.
- The certification process includes an application review and on-site inspection by independent auditors.
- There are currently two accredited producer in the US (Peter Cremer & West Central)

ASTM

- The American Society for Testing and Materials is basically a publishing house. They do not regulate anything.
- D 6751-03a is the current specification for biodiesel in the US.
- It defines the specific properties (or characteristics) the fuel must meet to qualify as biodiesel in the US.
- D 6751 references detailed test methods (also published by ASTM) that must be employed to quantify the fuel properties.
- ASTM is currently developing a Biodiesel “Fill and Go” or B20 specification for D 975 that is not based on the parent fuels, but on the finished (blended) fuel and what is satisfactory for operation in a diesel engine.
- D 6751 could change as a result of the B20 spec.

D 6751-03a

Property Test Method	Limits	Units
Flash point (closed cup)	130.0 min	°C
Water and sediment	0.050 max	% volume
Kinematic viscosity	40°C - 1.9–6.0	C mm ² /s
Sulfated ash	0.020 max	% mass
Sulfur	0.05 max	% mass
Copper strip corrosion	No. 3 max	
Cetane number	47 min	
Cloud point	Report E	°C
Carbon residue	0.050 max	% mass
Acid number	0.80 max	mg KOH/g
Free glycerin	0.020	% mass
Total glycerin	0.240	% mass
Phosphorus content	0.001 max	% mass
Distillation temperature	360 max	°C

Testing for D 6751

- To say your fuel meets D 6751 you need to test a sample in a lab that follows ASTM's test methods.
- The test methods even define what type of equipment and reagents are allowed.
- Some of the equipment is very specialized and is not commonly found in analytical chemistry labs (the flash point and cetane testers).

Mandate

The Minnesota B2 Mandate

- State-wide mandate requires 2% biodiesel in all diesel fuel sold for IC engines (except locomotives, mining and a few other exceptions)
- June 30, 2005 effective date

Coop

What's a Coop?

- A cooperative is a business. Ace Hardware and Southern States are big co-ops whereas Weaver Street Market and Piedmont Biofuels are small co-ops
- Coops are owned and democratically controlled by their members, not by outside investors; Co-op members elect their board of director from within the membership.
- Profits are returned to members proportionate to their use of the cooperative, not proportionate to their "investment" or ownership share.
- Theoretically, coops are motivated not by profit, but by service and exist solely to serve their members.
- Coops pay taxes on income kept within the co-op for investment and reserves. Profits revenues from the co-op are returned to individual members who pay taxes on that income.

Becoming a Coop

- In North Carolina you can incorporate as a cooperative by writing Articles of Incorporation and filing them along with a form B-01 to the Corporations Division of the NC Secretary of State.
- It is also possible to incorporate as another type of entity, like a 501(c)3 non-profit, and write your bylaws to ensure you function like a cooperative.

Coop Resources

- *Coops 101 - An Introduction to Cooperatives* USDA's Rural Development, Rural Business-Development Service:
<http://www.rurdev.usda.gov/rbs/pub/cir55/cir55rpt.htm>
- The University of Wisconsin Center for Cooperatives:
<http://www.wisc.edu/uwcc/>
- National Cooperative Business Association:
<http://ncba.coop/>
- Corporations Division, NC Secretary of State:
<http://www.secretary.state.nc.us/corporations/>