Arizona Biodiesel Regulatory Environment

Version 1.0 (May 2008)

by Samuel West for the Desert Biofuels Initiative

Introduction

Biodiesel as an alternative motor vehicle fuel provides many environmental and economic benefits. It is important to understand how biodiesel production from waste vegetable as feedstock fits within existing statutes and regulations at the federal, state and local levels. Many statutes and regulations explicitly cover biodiesel production. However, many others are left to interpretation. Multiple factors determine whether statutes and regulations may apply. These factors include the size of the operation, process and chemicals used in the production, waste products, water discharges and air emissions.

This paper addresses how existing statutes and regulations may apply to biodiesel production. The focus is on the federal, State of Arizona and City of Phoenix regulatory environment for the production of biodiesel. Federal and state laws apply to biodiesel through registration and taxation of the final product along with environmental laws regulating production. Local law applies through zoning and fire codes. The paper does not address incentive programs.

Federal Regulatory Environment

I. Registration

The U.S. Environmental Protection Agency (EPA) regulates fuels and additives under authority of the Clean Air Act.[1] Policies are implemented through EPA regulations. The EPA considers producers of biodiesel for highway use as manufacturers of motor vehicle fuel or fuel additive.[2] The EPA uses the ASTM definition of biodiesel as "mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats."[3] EPA regulations include "[n]o

manufacturer of any fuel [shall] sell, offer for sale, or introduce into commerce such fuel unless the Administrator has registered such fuel."[4] Since the EPA considers producers of biodiesel for highway use a manufacturer of fuel, biodiesel producers must comply with the registration requirements.

Registration allows the EPA to determine probable emissions and identify unreasonable risks to the public.[5] For registration, producers must complete a Fuel Manufacturer Notification for Motor Vehicle Fuel[6] in addition to providing feedstocks used for production, a description of the manufacturing process, emissions and health effects testing as well as test results of the manufacturer's biodiesel showing compliance with ASTM D6751.[7] Emissions and health effects testing may be satisfied by reaching an agreement with the National Biodiesel Board for Tier 1 and Tier 2 emissions and health effects testing data.[8] There is a small business provision for manufacturers of atypical fuels that average sales revenue is less than ten million dollars over the past three years. This allows for an exemption from Tier 2 requirements.[9]

Biodiesel producers also are required to register with the EPA as a refiner for both highway and non-road biodiesel.[10] Registration forms include the fuel programs company/entity registration and the diesel programs registration.[11] In addition, biodiesel producers must comply with the primary sulfur standard by testing each batch for sulfur along with the minimum cetane index, or maximum aromatics content. Reporting and recordkeeping must also be maintained.[12]

II. Taxation

A Federal excise tax applies to biodiesel. The tax is 18.3 cents per gallon for gasoline and 23.3 cents per gallon for diesel fuel.[13] The Internal Revenue Service (IRS) defines diesel fuels as "[a]ny liquid that without further processing or blending, is suitable for use as a fuel in a diesel-powered highway vehicle or train, and transmix."[14] A diesel-powered highway vehicle is defined as a "self-propelled vehicle designed to carry a load over public highways (whether or not also designed to perform other functions) and propelled by a diesel-powered engine."[15] Machinery designed specifically for off-highway use generally will not be considered a diesel-powered highway vehicle.[16] Biodiesel is defined by the IRS as "the monoalkyl esters of long

chain fatty acids derived from plant or animal matter which meet the registration requirements for fuels and fuel additives established by the [EPA] under section 211 of the Clean Air Act, and the requirements of the American Society of Testing Materials (ASTM) D6751."[17] The IRS document provides most biodiesel is classified as a diesel fuel for regulatory purposes which would make the tax applicable.[18]

In addition, other federal taxes may be applicable to biodiesel. Taxes are imposed to fund the Leaking Underground Storage Tank Fund which is currently one-tenth of a cent per gallon.[19] There is a tax on crude oil that applies per barrel produced for the Oil Spill Liability Trust Fund and Hazardous Substance Superfund. However, the definition of crude oil includes crude oil condensates and natural gasoline and therefore may not apply to biodiesel.[20]

The IRS designates the responsible party for paying the excise tax. Generally, if the diesel is sold to a non-registered party, the seller is responsible for the excise tax. If the diesel is removed by the refiner (this may be for use), the refiner is responsible for the tax.[21] Specific rules apply designating the responsible party for removal from terminals, removal from refineries, entry into the U.S. and removal and sale of blended diesel fuel.[22]

III. Production and Environmental Law

Multiple Federal environmental laws may apply to the production of biodiesel such as the Clean Air Act (CAA) and the Clean Water Act (CWA). The CAA is implemented through State Implementation Plans. CWA National Pollution Discharge Elimination Permits (NPDES) are administered at the state level in Arizona. These federal acts will be discussed in conjunction with other state statutes and regulations.

Chemicals used in the manufacture of biodiesel and waste products from the process may be covered under federal laws. The Occupational Safety Health Act (OSHA) may require facilities to meet Material Safety Data Sheet requirements.[23] If a chemical used in production qualifies, the producer may be subject to emergency planning and reporting requirements under the Emergency Planning and Right-to-Know Act, the CAA regulated chemicals for accidental release prevention and the Comprehensive Environment Response, Compensation, and Liability

Act (also known as superfund) for hazardous substances.[24] Moreover, if the EPA interprets biodiesel as oil under the Spill Prevention, Control and Countermeasure Rule, certain facilities may be required to have an oil spill prevention, preparedness and response plan which functions to prevent oil discharges to navigable water and adjoining shorelines.[25] If any waste products from the manufacturing of biodiesel are considered hazardous wastes under the Resource Conservation and Recovery Act, provisions may apply to biodiesel producers as a generator.

State of Arizona Regulatory Environment

I. Reporting

Arizona requires biodiesel reporting. Arizona statutes require a "person that blends biodiesel that is intended as a final product for the fueling of motor vehicles shall report to the director by the fifteenth day of each month the quantity and quality of biodiesel shipped to or produced in this state during the preceding month." The report is submitted to the Arizona Department of Weights and Measures. In addition, the statute requires reporting the percentage of biodiesel, the volume of the finished product, results of an analysis for ASTM D6751 parameters for neat biodiesel and results for ASTM D975 parameters for biodiesel blended with any diesel fuel. A dispenser of biodiesel must also label dispensers with the volume of biodiesel and sulfur content.[26] Current Arizona Legislative proposals may give the Arizona Department of Weights and Measures more responsibility in the regulation of biodiesel.

II. Taxation

Arizona also requires an excise tax on motor vehicle fuel "possessed, used or consumed" in the state. Motor vehicle fuel is defined as including "all products that are commonly or commercially known or sold as gasoline, including casinghead gasoline, natural gasoline and all flammable liquids, and that are composed of a mixture of selected hydrocarbons expressly manufactured and blended for the purpose of effectively and efficiently operating internal combustion engines."[27] Biodiesel most likely is a motor vehicle fuel and the tax will apply. Normally, the motor vehicle fuel tax is imposed at eighteen cents per gallon.[28] However, there

are different requirements for use fuels for a use class motor vehicle.[29] A use class motor vehicle is "a motor vehicle that uses use fuel on a highway in this state and that is a road tractor, truck tractor, truck or passenger carrying vehicle having a declared gross vehicle weight of more than twenty-six thousand pounds or having more than two axles."[30] The use fuel tax rate is twenty six cents per gallon. Certain exempt vehicles that meet the use class motor vehicle definition are only subject to eighteen cents per gallon the same rate as a motor vehicle fuel. In addition, there is a complete use fuel tax exemption for alternative fuels.[31] However, the definition of alternative fuels does not explicitly include biodiesel. The definition includes "[l]iquefied petroleum gas, natural gas, hydrogen or a blend of hydrogen with liquefied petroleum or natural gas" that meet certain standards.[32] In addition, there may be an applicable tax for underground storage tanks. This may be refundable for above ground storage.[33]

III. Production and Environmental Law

The Arizona Department of Environmental Quality (ADEQ) implements and enforces environmental law in Arizona. The two main applications applying to biodiesel production are under the federal CAA and CWA. The CAA requires stationary sources meet conditions of an air quality permit. An important consideration is the amount of pollution a facility is capable of emitting for determining whether a permit is required.[34] In addition, a facility may still need a permit based upon power or heat output.[35] Maricopa County has jurisdiction for stationary air pollutant sources (and portable sources that remain within their jurisdiction) and issues permits within its jurisdiction.[36] The air quality permit is an "authorization to build, install and/or operate equipment that emits, or controls, the emissions of air contaminants."[37] The air quality permits cover emissions of volatile organic compounds, particulate matter, carbon monoxide, nitrogen oxides, sulfur oxides and lead.[38]

Discharges from the production of biodiesel may be regulated under the CWA. Discharges to surface waters of the United States require a NPDES permit.[39] In addition, manufacturing facilities also require an NPDES permit when runoff from the facilities is "storm water associated with industrial activity."[40] In Arizona, NPDES permits are through Arizona

Pollution Discharge Elimination System (AZPDES) permits issued by ADEQ. The ADEQ must know if the facility is deemed consistent with the Regional 208 Water Quality Management Plan before issuing a permit.[41] Discharges into sanitary sewer systems may also fall under Arizona's pretreatment program based on the federal pretreatment program.[42] The Arizona pretreatment program applies to discharges to a sanitary sewer system that reach a publicly owned treatment works (POTW). The POTW may require industrial users to meet pretreatment standards. Industrial users are defined as those who introduce "pollutants into a publicly owned treatment works from any nondomestic source."[43]

New facilities in addition to construction permits may also require additional permits based on waste generation. The operation may require individual EPA identification numbers, hazardous waste management facilities annual registration, pollution prevention plan certification, special waste ID numbers, toxic data annual report approval, UST registration and notification changes.[44]

City of Phoenix Regulatory Environment.

I. Zoning

Zoning regulations apply to biodiesel fuel manufacturing facilities, distribution centers, fuel storage facilities and sale or distribution stations. Biodiesel manufacturing facilities require A-1 light Industrial Zoning or A-2 Industrial zoning districts.[45] Fuel distribution centers and fuel storage facilities require A-1 Light Industrial zoning districts.[46] In addition, Commercial districts C-1, C-2, C-3 and CP/GCP as an accessory use are required for sale or distribution of biodiesel (same as gasoline stations). These stations may also be in higher use districts such as A-1 and A-2.[47]

II. Fire Code

Phoenix Fire Code may also apply to biodiesel production. Chapter 22 covers Motor-Fuel Dispensing Facilities and Repair Garages and may be applicable to biodiesel.[48] Chapter 34

covers Flammable and Combustible Liquids and is applicable to qualifying liquids that may be used for biodiesel production.[49]

[Note: DBI has accumulated additional information concerning the regulatory environment in the City of Phoenix that will be reflected in a future version of this paper.]

Conclusion

Many statutes and regulations explicitly include biodiesel, however, many more have not addressed how biodiesel fits within the regulatory framework. Legislatures and regulatory agencies are starting to address biodiesel. In general, new statutes and regulations are supportive of biodiesel production. However, there are significant statutes and regulations that affect biodiesel production and may apply based on the size of the operation, process and chemicals used in the production, waste products, water discharges and air emissions.

1 see Clean Air Act §211.
2 EPA, *Guidance for Biodiesel Producers and Biodiesel Blenders/Users*, http://www.epa.gov/otaq/renewablefuels/420b07019.pdf (last accessed May 5, 2008).
3 *Id.* (The EPA definition of biodiesel does not include renewable diesel which is a non-ester based diesel blend along with neat vegetable oils and recycled grease that have not been processed into mono-alkyl esters).
4 40 C.F.R.§ 79.4 (a) (1) and (2).
5 EPA, *supra* n. 1.
6 EPA, *Form 3520-12*, http://www.epa.gov/otaq/regs/fuels/ffarsfrms.htm (last accessed Apr. 20, 2008).
7 EPA, *supra* n. 1.
8 *Id.*
9 40 C.F.R. § 79.58(d).
10 40 C.F.R.§ 80.
11 EPA, *Forms 3520-20A and 3520-20B1*, http://www.epa.gov/otaq/regs/fuels/rfgforms.htm (last accessed Apr. 20, 2008).

12 40 C.F.R.§ 80 Part I.
13 26 C.F.R. § 4081; 26 C.F.R. § 4041 (rate for alternative fuels is the same as for fuels under §4081 unless otherwise exempted or under a different rate).
14 IRS, *Pub 510*, http://www.irs.gov/publications/p510/ch01.html#d0e1420 (last accessed Apr. 20, 2008).
15 *Id.*
16 *Id.*
17 *Id.*
18 *Id.*
19 26 C.F.R. § 4041 (d).
20 26 C.F.R. § 4611
21 IRS, *Supra.* n. 14.
22 *Id.*
23 see OSHA, *Hazard Communication*, http://www.osha.gov/SLTC/hazardcommunications/index.html (last accessed May 5, 2008) (OSHA guidance).
24 see EPA, *Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-To-Know Act (EPCRA) and Section 112(4) of the Clean Air Act*, http://www.epa.gov/ceppo/pubs/title3.pdf (last accessed Apr. 20, 2008) (for a consolidated list of the chemicals under Emergency Planning and Right-To-Know Act).
25 40 C.F.R. § 112.
26 A.R.S. § 41-2083.
27 A.R.S. § 28-101 (33).
28 A.R.S. § 28-5606 A.
29 A.R.S. § 28-5606 B(2).
30 A.R.S. § 28-5601 (37).
31 A.R.S. § 28-5606 B(2).
32 see A.R.S. § 1-215 (4).
33 see A.R.S. § 49-1031.
34 see generally A.A.C. § R18-2 (also available at http://www.azsos.gov/public_services/Title_18/18-02.htm).
35 see ADEQ, Who Needs a Permit, http://www.azdeq.gov/environ/air/permits/assist.html (last accessed Apr. 20, 2008).
36 See ADEQ *supra* n. 31 (permits are required from ADEQ for sources that operate in multiple counties or outside county jurisdiction).
37 See Maricopa County Air Quality Department, *Do I Need a Permit*, http://www.maricopa.gov/aq/divisions/permit_engineering/do_I_need_a_permit.aspx (last accessed May 5, 2008).
38 *Id.*
39 see Clean Water Act § 402.
40 40 C.F.R. § 122.26 (b)(14).
41 see ADEQ, Regional 208 Water Quality Management Plan (summary available at http://www.azdeq.gov/environ/water/watershed/regional.html).
42 see 40 C.R.F. § 403; see generally Clean Air Act § 307(b).
43 see A.R.S. § 49-255 (3) and (4) (for definitions).

44 See AZDEQ, *Permitting: Do I need a Permit*, http://www.azdeq.gov/function/permits/doineed.html (last accessed Apr. 2008) (for permits by industry); also see A.R.S. §§ 49-901 to 49-973.
45 City of Phoenix Zoning Board of Adjustment appeal ruling, (Dec. 2007).
46 City of Phoenix Zoning, informal interpretation letter (Sep. 14 2007).
47 See generally Zoning Ordinance of the City of Phoenix, Arizona (2008) (also available at http://www.municode.com/Resources/gateway.asp?pid=13534&sid=3).
48 Phoenix Fire Code Ch. 22 (2006) (Motor-Fuel Dispensing Facilities and Repair Garages also available at http://www2.iccsafe.org/states/Phoenix2006/Phoenix_Fire/Fire_Frameset.htm).
49 Phoenix Fire Code Ch. 34 (2006) (Flammable and Combustible Liquids also available at http://www2.iccsafe.org/states/Phoenix2006/Phoenix_Fire/Fire_Frameset.htm).