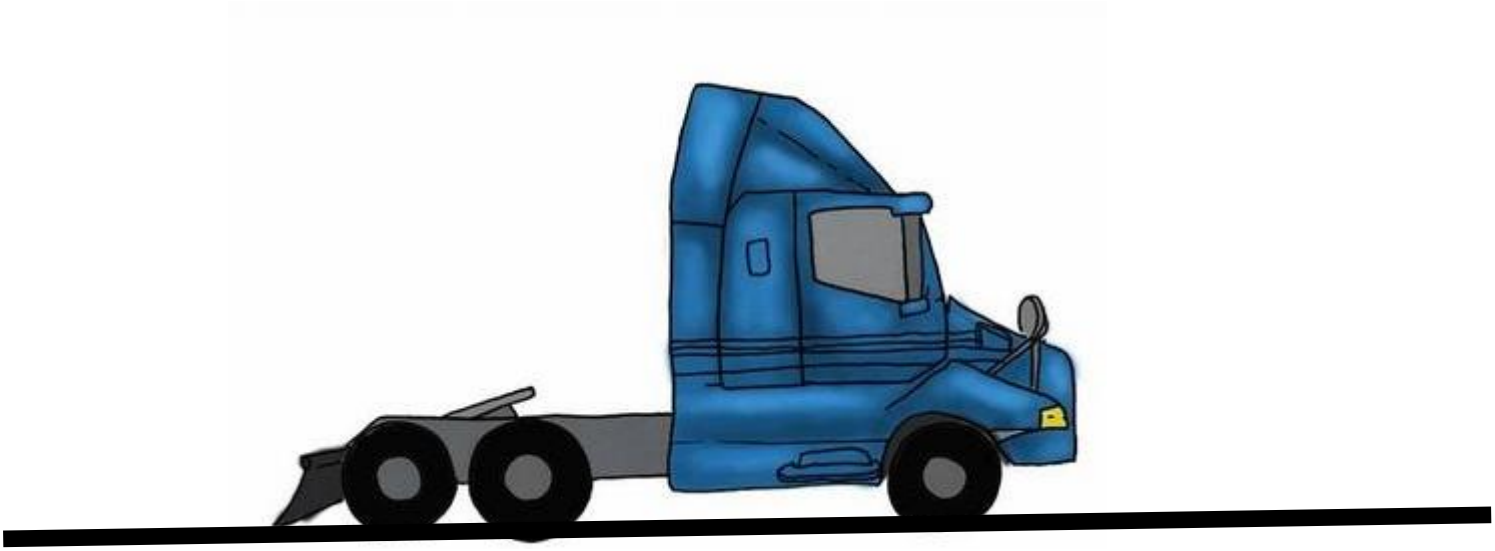
Advancing Biodiesel in New England

Biodiesel Regional Workgroup Report on
Breaking Barriers to Fuel Use in Transportation.



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The Biodiesel Regional Workgroup

Formed in 2013 as part of a grant provided by the US Department of Energy,[1] the Biodiesel Regional Workgroup addresses a comprehensive list of issues relative to biodiesel production and distribution in New England.

The focus of the workgroup is to "expand the use of biodiesel as a motor fuel in New England Region Clean Cities Coalition (NERCCC) states[2] by identifying and developing strategies to address barriers to biodiesel use, and developing education strategies to build awareness, support and increased usage of the fuel."

The group works to achieve the following:

- provide details on barriers to fuel adoption, pinpointing the root causes if possible;
- offer a spectrum of strategies to reduce or eliminate these barriers;
- increase awareness at the Federal level of impediments unique to the biodiesel industry; and
- draw attention to this fuel alternative to fleet managers and the public.

The group expects promotion of this document will:

- increase availability of biodiesel in the region;
- create jobs and economic growth through the advancement of the industry;
- foster measures that will protect the environment through the use of renewable fuels; and
- improve air quality by reducing emissions from petroleum.

[1] Grant secured by Maine Clean Communities, a program of the Greater Portland Council of Governments.
[2] Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Executive Summary

Five years ago, New Hampshire was home to a dozen fueling stations that offered biodiesel in blends of 20% (biodiesel blended with 80% petroleum diesel, known as B20). Today, just one site is offering B20 in the warmer months, and no B20 pumps are available to retail customers in winter. Maine had several fueling stations, in Portland, South China, Union and other locales. Currently, there are only two biodiesel fueling stations remaining, including one pump located at Maine Standard Biofuels, a local biodiesel producer.

In 2003, Cranmore Ski Resort[3] started fueling snow groomers with B20; many ski areas followed suit. Today, Cranmore no longer uses biodiesel and most of the other areas have switched back to petroleum diesel. The NH Air National Guard's fueling depot recently removed their biodiesel pump at its base in Newington, NH. University of Vermont, Shaw's Supermarkets and City of Bangor (ME) have also eliminated the fuel. Massachusetts has also seen a reduction in fueling sites and many of Vermont's larger fleets no longer use a biodiesel blend.

Why the change? In 2013 U.S. production met consumption with nearly 1.4 billion gallons produced, up from 991,000 in 2012[4]. What are the reasons biodiesel use has decreased in New England? What are the solutions?

The key to sustaining and increasing biodiesel consumption in fleets is to identify and address the barriers to fuel adoption.

Twelve barriers are addressed in this document. Key points are as follows:

- **Price** is a primary barrier to fuel adoption, with producers sacrificing to keep in line with petroleum diesel prices (reducing profits to secure sales) while also competing with biodiesel imports. Expansion of RFS volume requirements and use of the fuel by government fleets will reduce per producers' gallons costs.

- Producers' future business plans are left hanging with the **lapse of the tax credit** in 2010, 2012 and 2014, strengthening the future of the price barrier. The workgroup recommends the continuation of the Alternative Fuel Infrastructure Tax Credit to encourage more retail pumps, and that the expired tax credit continues as a producer credit, guaranteeing relief at the source.

[3] Cranmore Ski Resort is located in North Conway, NH.
[4] www.afdc.energy.gov/data/search?q=biodiesel

- **Lack of national fleet and large depot customers** hampers large-scale use of biodiesel in transportation. Clean Cities National Clean Fleets Partnership can help, as well as partnerships with large diesel fuel providers.

- **Lack of retail fueling sites** inhibits biodiesel use by smaller fleets and individuals who lack on-site fueling capabilities. Lack of widespread retail fueling sites also hampers large-scale use of biodiesel by larger fleets that rely on retail (as well as private) fueling sites.

- Perhaps the most belabored barrier is **BQ-9000 certification**, offered by the National Biodiesel Board, which is costly and requires a strict process. Smaller producers with quality product miss out on bid opportunities and fleet customers that require the certification. Most **Original Equipment Manufacturer warranties** include use of biodiesel blends if BQ-9000 certified fuel is used. Possible remedies include a modified version of the certification, to collaboration on lab testing (to reduce costs).

- Biodiesel producers also face other issues such as **lack of- and theft of-feedstock, logistics (lack of nearby blenders) and misinformation**, particularly of fuel use and care. Reducing or eliminating these barriers is key to widespread biodiesel adoption. Education and outreach is the first step. This document includes an outreach schedule and other pertinent documents.

A. Barriers

1. Price

Price volatility makes it difficult to plan future costs of operations and long-term growth.

The price of raw ingredients, RINS values and tax credit status play key roles in the pricing of biodiesel. When petroleum prices drop (as they have recently), biodiesel prices must be adjusted to remain competitive with diesel fuel. Biodiesel imports (particularly from Argentina and Indonesia) sell for less than the domestic product.[5] When biodiesel sales stagnate or decrease, economies of scale is reduced making it difficult to provide competitive pricing.

Desired Result: Producers offer biodiesel's per gallon price at or lower than that of petroleum diesel, competitive with imports, without cutting into profit margins.

Recommended Strategies:

Reduction of subsidies to petroleum companies. These subsidies can come in the form of lowered cost of production, higher income for the energy producers and/or lower price for consumers. It is estimated that the U.S. paid more than $4 billion in subsidies in 2014 that haven't shown a benefit to the economy or to consumers[6]. Paring down or eliminating these subsidies would increase consumer gas and diesel prices, and level the playing field, removing or reducing petroleum fuel's advantage.

Retention of volume requirements in the Environmental Protection Agency's (EPAs) Renewable Fuel Standard (RFS). The RFS requires refiners, blenders and importers to use a percentage of renewable fuel based upon product sales[7]. As volume requirements increase so will the demand for biodiesel. The biodiesel industry has met its requirements for fuel[8]. Increased demand will allow for economies of scale and help to stabilize prices. As of this writing, EPA has announced a delay in the finalization of the 2014 RFS volume requirements, keeping industry growth in limbo.

The lack of a decision by EPA challenges RINS trading as well. RINS prices have plummeted and deals are made between obligated parties and producers (neither has a concrete number by which to follow, whether its RINS credits or how much to charge for them). Those who must comply with

[5] /www.biodieselmagazine.com/blog/article/2013/06/why-us-imports-are-a-concern-but-dont-have-to-be
[6] http://harvardmagazine.com/2014/01/the-fix-in-fossil-fuels
[7] Overview of the Renewable Fuel Standard http://www.afdc.energy.gov/laws/RFS.
[8] www.nbb.org/news/nbb-press-releases/2013/12/04/biodiesel-supporters-to-voice-rfs-concerns-with-epa

the requirements are left to speculate on how much they need, leaving producers to deal with "confused" RIN prices and very little to go on in the way of following a business plan

Expand the RFS volume requirements to keep RINS values from declining. The biodiesel industry doesn't suffer a blend wall like ethanol and has proven itself by far exceeding the 1.28 billion gallons required for 2013. Producers wait for a separation of ethanol and biodiesel in the standard, treating each fuel based on utility, demand and ability to deliver product.

Since the implementation of the RINS system, credits fluctuate in price from 31¢ to well over $1.00. Surviving as a producer involves speculation as to the market for these credits as part of their business's income. Selling RINS is another avenue by which the producer can stay financially above water.

Expansion in government adoption of biofuel purchasing. More states requiring the use of biodiesel will help to ensure consistent demand and promote the benefits of economies of scale. Policies and practices ordered and implemented by municipal governments and school districts will enhance this. Ideally producers could count on a minimum number of sales as a result, which will allow for more accurate financial planning.

Legislative actions on the state level (NH, MA, RI) mandate or address biodiesel use and sales. Other states (VT) are considering implementing biodiesel and bioheat goals based upon subcommittee recommendations.

NH legislation requires biodiesel be purchased at blends of at least 5% if available and the same (or lower) price than 100% petroleum diesel[9]. Purchasers call for bid prices but don't check prices on a regular basis to see if the rule applies, which has been a barrier in this state.

[9] www.gencourt.state.nh.us/legislation/2008/HB1631.html

Barriers contd.

2. Uncertainty of Tax Credits

As an emerging industry in the early stages of development, biodiesel still needs tax credits, or suitable offsets, for long-term planning and growth as a commercial-scale fuel. However, there is tremendous uncertainty surrounding the Biodiesel Mixture Excise and Biodiesel Income Tax Credits. Since first being implemented in 2005, the credits have been allowed to expire four times in the past six years, including in 2010, 2012, 2014 and now in 2015. The expiration of the credits[10] has caused many small producers to shut down and in general, created chaos in the industry.

The three relevant tax credits, commonly referred to as the biodiesel tax incentive, expired most recently on 12/31/14 after a recent extension: the Biodiesel Mixture Excise Tax Credit, the Biodiesel Income Tax Credit and the Alternative Fuel Infrastructure Tax Credit.

It is difficult for small producers to stay in business without these tax credits and nearly impossible to create and follow a financial plan without knowing if the credits will remain in place. Profit margins are reduced and producers hesitate to add jobs or expand without the guaranteed tax break[11]. The uncertainty makes it difficult for producers to secure investment or financing. Many cut back production or postpone expansion plans, losing industry gains. This cycle hurts our nation's commitment to energy security and renewable fuels.

Desired Result: Biodiesel businesses can rely on consistent tax incentives, allowing them to plan for growth in the long term.

Recommended Strategies:

Continuation of the expired Federal tax credits to further support the industry and provide a $1 per gallon *Producer* Tax Credit in lieu of the Biodiesel Mixture Excise Tax Credit. Senate Bill S2021 was introduced by Senators Cantwell and Grassley in February of 2014 and to date there has been no further action. This bill provides multi-year credits (to 2017) with a $1.10 benefit to biodiesel producers for the first 15 million gallons of biodiesel produced by small producers with an annual production capacity of less than 60 million gallons[12]. Some would like to cut back the benefits outlined and it is hoped that the leadership will push for the bill to

[10] US DOE Alternative Fuels Data Center. Federal Incentives, Laws and Programs. www.afdc.energy.gov/laws/fed_summary
[11] www.law360.com/articles/497684/biodiesel-industry-urges-congress-to-extend-tax-credit
[12] www.grassley.senate.gov/news/news-releases/biodiesel-tax-credit-bill-introduced

pass as written. It is imperative that Congress work together to continue to support renewable energy production in the United States.

A producer tax credit would reduce costs and per gallon price at the source, empowering producers to purchase waste grease at fluctuating prices and offer the finished fuel at competitive prices.

Key to the survival of domestic producers is the ability to remain competitive. Allowing *blenders* to reap the $1 per gallon on any biofuel blended gives them the freedom (and perhaps an incentive) to purchase imported biofuel, weakening the domestic market and countering the DOE's goal to increase our nation's energy security through domestically produced fuel.

Extend the Federal Alternative Fuel Infrastructure Tax Credit. This tax credit as written provides relief from the high cost of installing a separate tank and pump system at one or more fueling sites. And, competitive prices (see **Producer Credit** strategy above) will encourage fuel retailers to once-again add biodiesel in B20 and higher blends, to their offerings at-the-pump.

Encourage Individual States to Allow Tax Credits for Biodiesel Production/Use. Incentives like the State of Maine's Biofuels Production Tax Credit of 5¢ per gallon equivalent of biofuel[13] (including biodiesel) provide to producers not only the ability to lower prices but also a show of the state's support of biofuels. Extending this or other incentives to biodiesel users would further support the effort.

[13] Maine Revised Statues Title 36, Section 5219-X www.mainelegislature.org/legis/statutes/

Barriers contd.

3. Participation in Central Depot Fueling

Key to the mass consumption of biodiesel in transportation is access to the fuel at a central depot. Large fleets like Ryder and Penske fuel at large, centrally located depots. These depots provide fuel for twenty or more customers.

Desired Result: Biodiesel blends are available at all fueling depots throughout New England.

Recommended Strategies: A relationship between fuel suppliers and fuel producers is key to removing this barrier.

Identify central depots. Environmental permitting agencies or fire marshals in each state/locale have contact information for area fuel depots. Producers should contact the depot managers to discuss including biofuels.

Connect with the large regional fuel providers. Producers can approach fuel giants Irving Oil and Cumberland Gulf to conduct pilot projects within each state. Providing locally processed quality fuel would greatly increase product demand. That the fuel is made from feedstock that is obtained and processed locally would have appeal.

Start small. Reluctant managers might consider a B5 blend and gradually work their way up to higher blend depending on time of year and customer feedback.

Partner with sites in close proximity to central depots. Smaller distributors in proximity of a large depot may be less hesitant to add biodiesel blends to their offerings. Producers can partner with the smaller fuel distributors, and fleets on their way to fuel at the larger depot will also pass the smaller biodiesel station. Good neighbors can foster good partnerships, too, and when other avenues haven't worked, being neighbors provides the opportunity to connect.

Work with Clean Cities National Clean Fleets Partners program. (See barrier "Connecting with National Fleets"). Mark Smith of the Clean Cities National Clean Fleets Partnership program can provide information on the dozens of large fleets involved in the national program. This allows local producers to connect with managers of that company at the source to discuss biodiesel use locally.

Work with Clean Cities Coalitions. Local Clean Cities coalitions connect people in the industry. Coalitions conduct visits with fleets in their area, during which coordinators speak with fleet managers about reducing petroleum and renewable fuels. Targeting the larger fleets and bringing up the benefits of biodiesel blends could encourage fleets to ask depot managers to offer biodiesel blends. These larger fleets influence smaller ones.

Consider adding mobile or on-site fueling (wet hosing) or finding a mobile fueling partner. This is another way to provide fuel to large fleets. Convenience and inventory control are the two big advantages for fleets that use this service. Biodiesel blends will be managed and success guaranteed by the fuel provider.

4. Connecting with National Fleets

Wide-scale use of biodiesel as a transportation fuel depends on wide-scale adoption by fleets of national corporations. The decision to use biodiesel often lies not with the local fleet manager but with central administration and corporate headquarters. Area biodiesel producers and distributors achieve varied results when attempting to connect with the national companies' area fleet managers to provide locally produced biofuel.

Desired Result: Biodiesel producers will build relationships with national companies' locally based fleets.

Recommended Strategies:

Connect with the Clean Cities National Clean Fleets Partnership program. The Clean Cities National Clean Fleets Partnership program currently includes twenty-six corporate fleets. These participants have pledged to reduce petroleum consumption. Each company's efforts make a significant difference due to the size of its national fleet. The NERCCC Biodiesel Regional Workgroup connected with Clean Fleets Partnership coordinator Mark Smith. Mark communicated with the partners in the form of an introduction letter (see Appendix 4). It is anticipated that this will pave the way for local producers and fuel providers to connect with local branches of national companies.

Utilize FleetSeek database. This subscriber database consists of local and North American fleets complete with contact information. Clean Cities Coalitions have access to local fleet information from this database.

Connect with the fleet's supplier. The supplier can make the introduction and even encourage the fleet to consider biodiesel blends.

Barriers contd.

5. BQ-9000

BQ-9000 is a "cooperative and voluntary program for the accreditation of producers and marketers of biodiesel fuel[14]" led by the National Biodiesel Board (NBB). A biodiesel producer, marketer or lab must meet certain standards and criteria to qualify for this certification. Certification ensures certain protocols are in place including regular batch testing (costly for small producers). The application fee starts at $3,800 for NBB members[15], with recertification every third year. Local biodiesel producers yield top quality product but many cannot afford the expenses associated with BQ-9000 certification.

This is a common dilemma. All things equal, fuel purchasers prefer to buy from a BQ-9000 certified establishment. Fifty certified producers exist in North America. Erie, Pennsylvania is the closest location of a BQ-9000 producer and only two producers on the eastern seaboard have the designation (both in North Carolina). No BQ-9000 certified producers are located in New England.

Moreover, out of the forty vehicle manufacturers that approve biodiesel in a B5 blend or higher, three recommend fuel from BQ-9000 certified channels (including General Motors) and six require the fuel be from BQ-9000 certified channels (producer, marketer): Caterpillar, Cummins, Hino, Navigant, Kenworth and Peterbilt.

The States of Massachusetts, North Carolina, Iowa and New Jersey as well as some municipalities currently require fuel from BQ-9000 certified entities[16] . According to NBB's Quality Assurance website 48 states require the fuel to meet ASTM 6751 quality standards before it can be sold in that state.[17]

BQ-9000 certification provides producers an opportunity to submit bid proposals to more state, municipal and private customers.

BQ-9000 certification allows producers to sell product that is in compliance with vehicle manufacturers' standards. The Magnuson Moss act protects consumers from manufacturers wanting to void a vehicle warranty simply because an alternative fuel was used. The manufacturer must prove the fuel caused damage. However, most fleet managers aren't interested in a fight

[14] BQ-9000 webpage www.BQ-9000.com/
[15] Fee does not include auditor travel expenses.
[16] www.trianglebiofuels.com/blog/?p=318, www.biodiesel.org/using-biodiesel/fuel-quality-guide/state-fuel-quality-index/viewstate?state=New Jersey, www.iowadot.gov/purchasing/12216pro.pdf
[17] NBB's Quality Assurance webpage www.nbb.org/results/project-showcase/quality-assurance

with the vehicle manufacturer and some have lowered their blends of biodiesel, or eliminated biodiesel from their fuel entirely to comply with the warranty of one new vehicle.

Desired Result: Biodiesel producers in New England meeting BQ-9000 criteria are certified.

Recommended Strategies: ASTM requirements for biodiesel quality are adequate to ensure a consistent and high end product. A top rating like BQ-9000 increases options for producers wishing to bid on contracts requiring the certification. New England producers want to grow their businesses. BQ-9000 provides a producer with the advantage needed for substantial sales of the fuel.

The BQ-9000 Accreditation Board should allow a multi producer discount based upon locale. According to Desiree Hale of NBB, the organization will waive the first year membership dues for producers or marketers desiring BQ-9000 certification. This is a savings of $2,500 in the certification process. A multi-producer discount on certification fees would further reduce certification costs.

Meet with the BQ-9000 representative to discuss options for small producers. Communication with producers is the first step to breaking this barrier and BQ-9000 program coordinators must work with smaller companies to give all in the industry a shot at certification. On May 8, 2014, NERCCC workgroup members attended a conference call with Scott Fenwick, NBB Technical Director, to discuss the process of attaining BQ-9000 certification. The workgroup will meet with Scott on January 27th in Newport Rhode Island to discuss steps to BQ-9000 certification.

Cooperative batch testing. If possible, producers should join together to form a cooperative to receive a price benefit for volume testing.

BQ-9000 *Lite*? Small producers should develop a system of verifying the quality of the product as an alternative to BQ-9000 certification. A second, less costly QM certification is an affordable option. NBB's Scott Fenwick has agreed to check with the Original Equipment Manufacturers (OEMs) for their opinion. Convincing OEMs to allow or recommend the second version of certification would be a viable compromise.

Promote 1-B grade biodiesel or create a regional standard. Some producers are opting to make biodiesel of 1-B grade[18]. 1-B grade demands

[18] www.biodiesel.org/news/news-display/2012/07/25/industry-improves-biodiesel-specifications-to-meet-needs-of-today's-fuels

more stringent controls of raw materials (limits on monoglycerides), producing a quality product that reduces filter clogging, particularly when used with ultra low sulfur diesel. This product works quite well in winter; some users report the ability to use higher blends in cold weather when mixing with 1-B. Using 1-B blends can be a marketing tool, assuring a finer product ("biodiesel ultra").

Barriers contd.

6. Logistics

Small producers often must be waste grease collectors, customer service representatives, export agents and sales representatives in order to get the finished product out the door. Without a customer or partner willing to purchase all B100 made, producers also become fuel blenders, driving partially filled trucks to the bulk fuel rack for petroleum diesel, and splash blending it with the biodiesel to sell to customers. Willing distributors delivering fuel to customers also splash blend. Lack of a blending facility is a drawback to biodiesel and possibly why more fuel retailers don't offer the fuel. National policies also compound the effect of these local-market restrictions. Until recently, exporting biodiesel to Europe involved tariffs[19] to discourage imports from flooding the market.

Desired Result: A streamlined process from plant to vehicle.

Recommended Strategies:

Alliances. Strong alliances between producers and retailers are necessary to ease the logistics barrier. Blending facilities like Bourne's Energy[20] in Vermont can bridge the gap in the northern region. Storage sites with two tanks on the property blend product as it's dispensed into delivery trucks (like Simply Green in southern New Hampshire). Several facilities in Massachusetts are interested in marketing B20. Producers can connect with petroleum diesel bulk fuel providers.

Affiliation with clubs and associations. Producers benefit through affiliations with clubs and associations, such as the Massachusetts Retailers Association.

Attendance and participation in industry events. Industry specific events can forge partnerships. Connections are made and business conducted at conferences and meetings.

Cooperative leasing. By cooperative leasing of a heated outdoor storage tank in proximity to diesel tanks, local producers put their product in easy reach of fuel providers.

[19] In 2009, the European Union (EU) imposed duties on the U.S. and other countries in an effort to protect the Union's biodiesel industry. These restrictions recently expired and the EU is looking at renewing them.

[20] www.bournesenergy.com/biodiesel/biofuelblending

Partner with oil distributors to haul product. Small producers can create alliances with oil distributers by demonstrating the quality advantages and pricing flexibility afforded by using a local product. Support for biodiesel from an existing customer also increases the likelihood of a distributor-producer partnership.

Diversify. In addition to selling biodiesel fuel wholesale and retail, Cape Cod Biofuels sells restaurant grade cooking oil. This allows the company to generate profits from the sale of the fresh oil and again from the biodiesel produced from that same oil. Once the oil is spent, they collect it and use it to produce biodiesel; a truly full cycle cooking oil company. Maine Standard Biofuels partners with other restaurant service companies to offer combined services such as grease trap cleaning and solid waste collection. Combined services offer less hassle and cost for restaurant owners and often reduce feedstock cost.

Reduce or remove export tariffs. The industry will benefit from the expiration of Europe's tariffs. If Europe does renew the tariffs, it would be beneficial to U.S. producers if the amount of duty required were reduced.

7. Industry's Lack of Promotion of Biodiesel

Consumers, and some fleets are less aware of the benefits of biodiesel than of the benefits of Bioheat.[21] Bioheat has been marketed to American households to boost sales of bio-blended home heating oil. Sales of biodiesel would increase throughout the U.S. with an aggressive marketing campaign and strong spokesperson.

Desired Result: Increased awareness of biodiesel as a transportation fuel through an organized, persistent promotional campaign.

Recommended Strategies: NBB seeks to "advance the interests of its members by creating sustainable biodiesel industry growth[22]." The organization has done much to promote the fuel on the national level. More needs to be done to reach fleets and fuel retailers.

Partner with NBB. A partnership between biodiesel producers and NBB would further awareness of the benefits of biodiesel in transportation. The national board can increase activities promoting the fuel in transportation, and continue to work with OEMs to address the fuel blend in a positive light in vehicle warranty pamphlets and owner's manuals.

Create a spokesperson. The industry would benefit from a spokesperson and media campaign. Paul Nazzaro of Advanced Fuel Solution, Inc. is also an advocate for NBB's Bioheat education program. A similar initiative for biodiesel in transportation, including a logo and campaign, would greatly improve biodiesel awareness.

Create a biodiesel handbook. Use current information and tried and true points from other publications. Include "Five Steps to a Biodiesel Fleet" (page 32) and resources.

Launch *YouTube* series. Create short videos with facts, FAQs and trouble-shooting tips. Dr. Dan's Biodiesel[23] is a resource for biodiesel enthusiasts. The company is multifaceted with a retail location (Seattle, WA), web page, events, *YouTube* segments designed to troubleshoot, and other promotional tools.

[21] Bioheat is a registered trademark and logo of NBB, licensed to the National Oilheat Research Alliance.
[22] http://nbb.org/about-us/mission-vision
[23] http://drdansbiodiesel.com/

Barriers contd.

8. Lack of Feedstock /Price of Feedstock/Theft of Feedstock

Producers are unable to produce to their facility's capacity for lack of stock.

Gone are the days when a restaurant or cafeteria would pay to have its waste grease removed. "Yellow grease" is the feedstock of much of New England's biodiesel and some of this feedstock is exported to Europe on the commodities market. Commodities companies pay top dollar for the grease and restaurants sell it to the highest bidder.

The high and volatile price of the raw material was unexpected and has a direct impact on profits. Gathering feedstock from area kitchens was not included in many New England producers' business plans, nor was paying top dollar for feedstock.

Many producers have trucks that pick up the grease at various locations. As yellow grease prices increased, so did thefts. With restaurant and campus kitchen staff unaware as to who is buying their spent oil, thieves are slipping into kitchens and removing the grease, leaving tanks empty when the collector arrives for pickup.

The ability to produce enough fuel to export is linked directly with the availability of feedstock, of course. Exporting is not an option if there isn't enough feedstock to produce the fuel.

Desired Result: Available, affordable feedstock. Reduction of theft.

Recommended Strategies: It's doubtful that penalties for theft of waste grease would be increased enough to eliminate theft. However, increased awareness about the crime may result in fewer cases going unpunished.

Waste grease collector I.D. system. Producers can band together to create an I.D system so restaurants and cafeterias know who is picking up their grease. Kitchens don't get paid for the grease if their contracted company does not extract it. Lock systems are another possibility.

Increase stringency on permitting to pick up waste grease. Some states require a permit to pick up waste grease and enforcement should be stepped up. Local producers would benefit from incentives that would keep the waste grease in the state of origin.

Regulate export of waste grease to discourage domestic feedstock from being shipped overseas. Disincentives like FOB fees will help to

solve the feedstock shortage. Additionally restrictions should be placed on imported biodiesel with a close eye on pathways to limit the amount of RIN worthy biodiesel coming into the country, protecting the industry from undercutting.

Government incentives provided to build crushing plants. Imported feedstock would then be purchased at reasonable prices and the finished oil used as feedstock for domestically produced biodiesel. This would cut costs for producers and increase feedstock availability.

9. Misconceptions

The perception of biodiesel as a transportation fuel is fraught with wrong information. One common misconception is that a vehicle must be converted in some way to use biodiesel. Other misconceptions surround topics like fuel gelling, quality, warranties, clogged filters and DPF equipment as well as the definition of the fuel itself. Biodiesel is often first to be blamed for vehicle or fuel site malfunction.

Desired Result: Fleet managers and vehicle owners understand the characteristics of biodiesel blends and the negative impacts of petroleum.

Recommended Strategies: Education on and experience with the fuel are the only ways to correct misconceptions. An unhappy manager or driver will spread bad news about the fuel to others. This is true with every alternative fuel or new technology used, and many other new products and processes.

Events, webinars, presentations. Providing free opportunities to educate fleet managers is the best defense. Include testimonies of area fleet managers who have overcome their misconceptions and learned to be successful in their use of the fuel in their fleets.

Trainings. Training of on-site mechanics and maintenance staff on the characteristics of biodiesel and use and care will remove misconceptions and dispel rumors. Community college automotive departments should be approached. (The National Alternative Fuels Training Consortium offers Introduction to Biodiesel and Biodiesel Mechanic Training courses.)

Directives from upper management. Fleet managers are key to fuel adoption. They're also barriers if they have had or heard of a fleet that had problems. In this case fleet managers must receive direction from a higher up or through company policy or business plan. Targeting a company's desire to be a "good environmentally conscious neighbor" can lead to pilot projects.

Address any perceived problems quickly. Insuring good communication with customers reduces the chance that biodiesel will be blamed for a malfunction. Often "problems" are just misunderstandings about the characteristics of biodiesel.

Educate the experts! Boots-on-the-ground industry professionals should consistently provide the experts with up-to-date information. These experts have credibility, can dispute erroneous information and should do so in a public forum.

Unify the message and stick to it. The industry must create a strong message that's easy to communicate to government and private fleets and consumers. Slogans, web pages, and branding will help consumers identify with the fuel and the person/fleet they want to be, driving up demand. One unified message used by all producers and distributors will strengthen the impression of the fuel and facilitate consistent demand.

Focus on articles that promote biodiesel. For every article discussing the problems associated with biodiesel use there are many more articles promoting the fuel. Advocates for the fuel must be familiar with the challenges (gelling, filter clogging) and be prepared to reference articles from reputable sources that counter any negative claim or provide a sensible fix. A list of well-known articles is included in Appendix 2.

***You*-tilize YouTube!** This widely popular site is a great way to promote the fuel and provide education to all consumers. It's a great place to put that cold weather video! Dr. Dan's Biodiesel[24] is one of many organizations that provide instruction and promotion of biodiesel. Informative and helpful videos will build a reputation and become the "go to" site for reliable information.

Make a cold weather video. Clouding and gelling are big issues for fleet managers. Like gasoline and diesel, Biodiesel use and storage must be managed. A new video providing an update on the quality of today's biodiesel and care in the colder temps would educate fleets and distributors tasked with managing the fuel.

Buy local! Promote the appeal of a New England fuel produced in New England with feedstock collected from kitchens throughout New England.

Green and domestic. New diesel vehicles using B20 or ultra-low sulfur diesel are 90% cleaner than their counterparts ten years ago. Current EPA air quality standards[25] dictate all 2010 and newer engines will have to "meet the same emissions standards whether running on biodiesel or diesel."[26] This improvement eliminates the case made for biodiesel as a cleaner emitting fuel alternative for vehicles manufactured 2010 and later.[27] However, energy independence is a significant concern locally and on a federal level.

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[24] http://drdansbiodiesel.com/

[25] NREL also produced a Biodiesel Use and Care Guide (2009) indicating hydrocarbon and particulate matter benefits from biodiesel, reduce emissions from greenhouse gasses. www.nrel.gov/vehiclesandfuels/pdfs/43672.pdf

[26] www.afdc.energy.gov/fuels/biodiesel_benefits.html

[27] Vehicles older than 2010 will still reap the benefits described above by using biodiesel.

Energy independence encourages fewer altercations in global oil supply areas. Increasing our energy security by reducing our dependence on foreign oil should be important to fleets, as should the "green" component biodiesel add to the fleet's image. Both should be promoted[28].

[28] Biodiesel is also lower in particulate matter and has other health benefits.

10. Use and Care Inconveniences

Like all fuels, biodiesel has a care regiment that must be followed for trouble-free use. Similar to diesel and gasoline, biodiesel blends must be treated in the colder weather to reduce gelling and clouding. Biodiesel has a higher cloud point than petroleum diesel and when mixed with treated ultra low sulphur diesel the fuel should perform without any problems.

B20 and lower blends can be used year-round in New England. Higher blends can be used seasonally. However, in both cases fleet managers and distributors must be proactive with regard to cold weather fuel care.

Fuel must be managed and its manager cognizant of what fuel remains in the storage tank, what blend is about to be delivered and how long it will be before the stored fuel is used up. Winter blend is needed for cold weather.

Desired Result: Fleet managers understand the characteristics of fuel blends and manage fuel stored and dispensed.

Recommended Strategies:

Education. Education is key to removing this barrier. The National Renewable Energy Lab (NREL) created a "Biodiesel Use and Care Manual" which helps fleet managers learn how to care for their fuel. Several distributors and retailers are offering full service fuel care, whether the treated fuel is delivered to customer's storage tanks or directly into their trucks. There is a selection of cold flow products available to treat the fuel.

Heated and insulated tanks. Heated and insulated tanks keep the fuel flowing in the bitter cold. Tanks inside a heated building are another option for fuel care in cold weather.

Hold a mechanic workshop. NBB and the National Alternative Fuels Training Consortium offer biodiesel mechanic training workshops with local biodiesel champions available to provide first-hand testimonies. This helps attendees through the process of caring for the fuel.

Opt for 1-B grade. The improved cold flow properties of biodiesel in 1-B grade will reduce the risk of gelling on frigid days.

11. Warranty Issues

For years Original Equipment Manufacturers (OEMs) and their sales and service staff frightened vehicle owners by threatening to void warranties if biodiesel is used. Fleet managers do not want the hassle of fighting with OEM representatives should a problem arise.

The situation improved when OEMs started approving biodiesel blends for their vehicles but that led some fleet managers to dial back their blend number to comply with OEM recommendations, e.g. a fleet manager using B20 in the entire fleet decides to reduce the blend in all vehicles to B5 when one new vehicle is OEM approved for B5 use only.

Desired Result: Fleet managers use biodiesel blends without fear of warranty issues.

Recommended Strategies:

Provide documentation that warranties will not be voided solely by the use of biodiesel. OEMs cannot void any warranties simply because biodiesel is used as fuel: NREL's Biodiesel Handling and Use Guide provides the following information on diesel vehicle warranties under federal law:

> "*Engine and vehicle manufacturers provide a materials and workmanship warranty on their products. Such warranties do not cover damage caused by some external condition. Thus, if an engine using biodiesel experiences a failure unrelated to the biodiesel use, it must be covered by the OEM's warranty. Federal law prohibits the voiding of a warranty just because biodiesel was used—it has to be the cause of the failure. If an engine experiences a failure caused by biodiesel use (or any other external condition, such as bad diesel fuel), the damage will not be covered by the OEM's warranty. Many engine OEMs acknowledge biodiesel use by stating their observations about harmful effects (or lack thereof) with various blends in their equipment. Most OEMs declared a lack of harmful effects for B5 and lower blends, based on a statement by the leading fuel injection equipment suppliers, as long as the biodiesel meets ASTM D6751 or the European biodiesel specification. Some OEMs recognize higher blend levels. More evaluation is underway in the diesel engine industry related to biodiesel and its effects on diesel engines. Damage directly attributable to biodiesel will not be covered by an engine OEM's warranty, but may be covered by the fuel supplier's general liability insurance. New*

biodiesel users should be sure their biodiesel suppliers provide liability coverage on the biodiesel and its blends[29].”

Recruit experts in warranty law to reassure fleet managers. Getting fleet managers comfortable with using fuel blends higher than what is recommended by their newest vehicle’s OEM continues to be a barrier to adopting biodiesel in higher blends.

The Magnuson Moss act protects consumers from manufacturers wanting to void a warranty simply because a type of fuel was used, unless they can prove the fuel caused damage.

Work with NBB to launch an outreach campaign to educate fleets. NBB states: “All diesel engine companies warranty the product they make - engines. They warranty their engines for “materials and workmanship.” If there is a problem with an engine part or with engine operation due to an error in manufacturing or assembly within the prescribed warranty period, the problem will be covered by the engine company.

Typically, an engine company will define what fuel the engine was designed for and will recommend the use of that fuel to their customers in their owner's manuals.

Engine companies do not manufacture fuel or fuel components. Therefore, engine companies do not warranty fuel - whether that fuel is biodiesel or petro diesel fuel. Since engine manufacturers warranty the materials and workmanship of their engines, they do not warranty fuel of any kind. If there are engine problems caused by a fuel (again, whether that fuel is petro diesel fuel or biodiesel fuel) these problems are not related to the materials or workmanship of the engine, but are the responsibility of the fuel supplier and not the engine manufacturer. Any reputable fuel supplier (biodiesel, petro diesel, or a blend of both) should stand behind its products and cover any fuel quality problems if they occur[30]”.

[29] For more information on federal vehicle warranty regulations, please refer to the Magnuson–Moss Warranty Act of 1975, which can be found in Title 15 of the U.S. Code of Federal Regulations, section 2302(c). For a list of OEMs and the biodiesel blends they warranty their vehicles for, please refer to the National Biodiesel Board’s (NBB) OEM Statement Summary Chart (www.biodiesel.org/using-biodiesel/oem-information/oem-statement-summary-chart). Please note that these warranty thresholds are only valid if the biodiesel used meets ASTM D6751 (for B100) and ASTM 7467 (for B6 to B20).

[30] www.biodiesel.org/using-biodiesel/oem-information

Barriers contd.

12. Lack of Retail Biodiesel Fueling Sites

Five years ago New Hampshire had seven public fueling sites for B20. Today just one dispenser exists for public fueling of B20. Massachusetts, Maine and Vermont have also seen a drop in the number of public access sites[31]. The number of retail stations selling biodiesel nationwide grew to 742 in 2007 dropping dramatically the following year with numbers slowly building back up to 757 in 2013[32]. Just over half of the forty OEMs listed on NBB's website state that they allow biodiesel use in various blends which should increase demand.

Fuel price increase and poor quality are the primary reasons for the demise of public B20 fueling in the area.

Desired Result: Increase in biodiesel retail fueling sites throughout New England.

Recommended Strategies: Retailers must be motivated to offer B20 at their sites. Blending pumps (which allow the consumer to choose the ratio of biodiesel to petroleum) are recommended.

Start at the source. Producers should have a dispenser at or near their facility to promote the sale of the fuel to retail customers.

Opportunities to lease unused tanks from retailers. Producers should partner with willing parties to provide biodiesel fueling at unused fueling stations (with compliant storage tanks).

Extend the Alternative Fuel Infrastructure Tax Credit and provide local incentives. This federal infrastructure tax credit as written provides some relief from the high cost of installing a separate tank and pump system at one or more fueling sites. Local incentives may be the deciding factor for some businesses, and shows support of cleaner fuels.

Guidance and education to fuel retailers on the benefits and care needed to manage the fuel. NRELs "Biodiesel Use and Care Manual" and biodiesel workshops will help interested parties with the process of caring for a retail pump. Clean Cities coalitions can conduct workshops and connect interested parties with those in the industry to streamline this process.

[31] Rhode Island's number of retail sites has not changed.
[32] www.osti.gov/bridge/basicsearch.jsp and www.afdc.energy.gov/afdc/fuels/stations_counts.html

DOE sponsored program "Biodiesel Everywhere." NBB has expressed interest in partnering with DOE to launch a program designed to encourage the widespread use of biodiesel blends assist producers to get more businesses on board, increasing interest in dispensing the fuel at stations. Availability will increase familiarity which increases sales.

Carbon tax for individuals and fleets. A tax on petroleum diesel will encourage the use of cleaner fuels.

Revise ASTM standard for diesel. ASTM, Intl. can revisit the diesel standard D975 to look at the feasibility of increasing the amount of biodiesel blended into petroleum diesel, still meeting reasonable specifications. This may be done with minimal push back by increasing the blend up to 8% provided the fuel meets 1-B standards[33].

[33] See "BQ-9000" section for 1-B benefits.

B. Marketing

The following are the workgroup's recommended marketing strategies:

- Assistance with promotion of biodiesel through national and local Clean Cities programs, environmental state agencies and special interest groups.
- Business and coalition newsletters should contain a biodiesel article or happening in each issue.
- States provide heavily advertised incentives for fleets to use biodiesel blends.
- Education and outreach via Clean Cities, National Biodiesel Board and other special interest groups.
- Promotion at transportation related events (booths, tables, sponsorships and plenary participation).
- Promotion at non-transportation related events (for public awareness).
- State mandates, published frequently in government publications and general media.
- Industry leaders' road trips to promote use of the fuel.
- Visible support from the President and current administration in the form of press conferences and pledges to support legislation in favor of biodiesel in transportation.
- Champions at NBB and large corporations to write articles and endorse the use of biodiesel.
- State and federal agencies incorporate biodiesel in their emergency preparedness plans and advertise that they do.
- Create a presentation based on this document.
- Create a biodiesel handbook.
- Partner with American Lung Association (www.lung.org).
- Events, fairs, newsletters, tours, shows, conferences.

C. Biodiesel Workgroup Education and Outreach Schedule

The following is the workgroup's calendar of events:

- Green Your Fleet June 2014
  Fleet manager workshop on alt fuels, biodiesel is included
- Biodiesel Mechanic Training - RI August 19, 2013
- Biodiesel Mechanic Training – NH October 6, 2014
- Biodiesel Mechanic Training – ME October 7, 2014
- Biodiesel Mechanic Training – MA May 20, 2014
- Biodiesel Mechanic Training – VT May 21, 2014
- Maine Standard Biofuels facility tour – October 7, 2014
- AltWheels Fleet Day October 2014
  Annual event on alternative transportation fuels
- National Biodiesel Conference & Expo – January 19-22, 2015
- National Biodiesel Day March 18, 2015
  NBB & Clean Cities Coalitions work together to promote the fuel
- International Biomass Conference & Expo – April 20-22, 2015
- NBB Regional Meeting (TBD – July 2015)
- AltWheels Fleet Day October 2015
  Annual event on alternative transportation fuels
- National Advanced Biofuels Conference & Expo – October 26-28, 2015
- National Biodiesel Conference & Expo 2016 TBD
- National Biodiesel Day March 18, 2016
  NBB & Clean Cities Coalitions work together to promote the fuel
- Green Your Fleet June 2016
  Fleet manager workshop on alt fuels, biodiesel is included
- AltWheels Fleet Day October 2016
  Annual event on alternative transportation fuels

D. Conclusion

Biodiesel has played a significant role as a viable fuel in New England fleets for decades. The expiration of tax credits in 2009 had a negative fiscal impact on local producers; many struggled during start up only to lose momentum when fleet managers and fuel distributors recoiled at the increase in price. With the future of these credits continually in flux, many small producers still face uncertainty, particularly given the EPA's delays in setting volume requirements. New England producers are struggling to grow. The reasons, and possible remedies, are listed in this document.

Biodiesel is a non-toxic, renewable fuel that, when burned, is lower in particulates than diesel. Biodiesel use reduces harmful greenhouse gas emissions and improves fuel lubricity. Industry growth creates jobs and increases our energy security by reducing our dependence on foreign oil.

State and federal governments must lead by example by using biodiesel. The fuel should be a part of every emergency disaster plan. As technology improves and those in transportation see the benefits, barriers will be reduced. Outreach, education, partnerships and pilot programs are effective strategies in the promotion of this versatile transportation fuel.

Appendix 1

Five Steps to a Biodiesel Fleet

Biodiesel is an American renewable fuel derived from new and used vegetable oils and animal fats. The fuel is non-toxic and biodegradable. Only biodiesel meeting ASTM 6751 standards can be sold in New England.

Using biodiesel blends increases our nation's energy security by reducing dependence on foreign oil. Biodiesel increases fuel lubricity when added to today's ultra low sulfur petroleum diesel. Best of all, biodiesel can be used in any diesel engine with no need for engine or vehicle modifications.

Considerations:

1. UTILITY. Any diesel vehicle can use a biodiesel blend without conversion. Biodiesel cannot be used in spark ignition (gasoline) engines. The more vehicles that use a biodiesel blend, the greater the benefit to the environment and our nation's energy security.

2. AVAILABILITY. Biodiesel is readily available to fleets that use a private fueling station or supplier that carries the fuel.* Fleets that rely on retail pumps can determine the nearest biodiesel pump by visiting: www.afdc.energy.gov/locator/stations or talking with their retail fuel provider who may be interested in offering a biodiesel blend.

3. BUSINESS MODEL. Is switching to a cleaner, domestic transportation fuel part of your company's green initiative? Anticipated ancillary benefits: company integrity, consumer appeal, market strategy.

4. VEHICLE PREPARATION. No vehicle upfitting or modification required! However, due to biodiesel's solvent nature older engines may need an extra filter change or two in the beginning (as deposits are cleaned out of the vehicle's fuel tank).

5. KNOW YOUR FUEL. It is important to manage your fuel. Biodiesel (and diesel) stored for months or in tanks of vehicles rarely used may be of a blend appropriate for a prior season. Biodiesel and diesel are treated with additives in winter. Your fuel supplier can provide the information you need for trouble free storage. More information on the use and care of biodiesel can also be found at www.nrel.gov/docs/fy09osti/43672.pdf.

*It is recommended that older storage tanks are cleaned prior to receiving the fuel.

True Cost of a Gallon of Gasoline or Diesel: $10? $15?

from *Treehugger*, February 29, 2012 (www.treehugger.com)

Billions of dollars are spent defending U.S. global oil interests. When more fuel is produced within the U.S. that dependency is reduced. Energy security can lead to fewer altercations.

In 2012 the U.S. relied on 40% of its petroleum to come from other countries; about 29% of those imports came from Persian Gulf countries[34].

Associated expenses:

Raw goods: The cost of crude oil.

Refining: The cost of the refining process.

Externalities: The costs borne by society as part of using the fuel in our vehicles and machines. Total estimated cost is $550 billion to $1.7 trillion per year:

- Military support/wars (lives lost)
- Health effects from air pollution (estimated at $1,250 per person per year, including)
    - Missed work days
    - Widespread illness and death
- Environmental degradation
- Tax subsidies (estimated at $594 billion in 60 years)
- Industry cleanups (approximately $½ trillion every year)
- Loss of opportunity to use a cleaner fuel

[34] www.eia.gov/energy_in_brief/article/foreign_oil_dependence.cfm

Appendix 2

Popular Articles on Biodiesel

NREL/Oakridge/Emissions Control Assoc. "Effect of Accelerated Aging Rate on the Capture of Fuel-Borne Metal Impurities by Emissions Control Devices" www.afdc.energy.gov/uploads/publication/61077.pdf - this study points out that B20 might be a problem in a heavy-duty vehicle over its useful life. The study pushed the envelope for performance and NREL suggests readers think of the test as a worst case scenario to see if they could "break the after-treatment." NREL further states that with an on-spec product the problems experienced in this test are unlikely to occur.

NREL "Effect of Biodiesel Blends on Diesel Particulate Filters" www.nrel.gov/docs/fy07osti/40015.pdf portrays an increase in regeneration rate in Diesel Particulate Filters (DPF).

Ron Kotrba's "Enhancing the Burn" http://biodieselmagazine.com/articles/1247/enhancing-the-burn/ lists the advantages of biodiesel blends, particularly the fuel's ability to reduce the temperature by which the particulates are burned off and providing additional reduction in particulate matter.

"Low Cost Biodiesel Production" http://biodieselmagazine.com/articles/9482/low-cost-biodiesel-production

"Top 10 Advantages of Biofuel" http://auto.howstuffworks.com/fuel-efficiency/biofuels/10-advantages-of-biofuels.htm#page=0

Appendix 3

List of Champions

MA's Biodiesel Fleet Champions

Andrew Davidson
Cape Cod Biofuels
(508) 833-8666
adavidson@capecodbiofuels.com
http://capecodbiofuels.com/
B100

Lauren McKean
Cape Cod National Seashore
99 Marconi Site Road
Wellfleet, MA 02667
(508)957-0731
Lauren_mckean@nps.gov
www.nps.gov/caco/
B20

Jim McGonagle
City of Boston
Boston, MA 02201
(617) 635-7612
Jim.McGonagle@cityofboston.org
www.cityofboston.gov
B20

David Harris
Harvard University
Cambridge, MA 02138
(617) 495 5589
www.harvard.edu
B20

Bill Watts
University of Massachusetts
Amherst, MA 01003
(413)545-4682
wwats@admin.umass.edu
www.umass.edu
B20

ME's Biodiesel Fleet Champions

Dave Green
Oakhurst Dairy
Portland, ME
(207)772-7468
dgreen@oakhurstdairy.com
B20-50

Nick Mavodones
Casco Bay Lines
Portland, ME
(207)774-7871
B5-B20

Stuart Axelrod
Casella Waste Systems, Inc.
Scarborough, ME
(207)883-9777
Stuart.Axelrod@casella.com
B20

Jarmin Kaltsas
Maine Standard Biofuels
Portland, ME
(207)878-3001
jarmin@mainestandardbiofuels.com
www.mainestandardbiofuels.com/
B20-B99

Dave Nelson
National Distributors
South Portland, ME
(207)773-1719
dave@nat-dist.com
B5+

NH's Biodiesel Fleet Champions

Mike August
City of Keene
Keene, NH
(603)757-0658
maugust@ci.keene.nh.us
B20

Mike Whitten
Manchester Transit Authority
Manchester, NH
603.623.8801
mwhitten@mtabus.org
B5-B20

David Green
Oakhurst Dairy
Hooksett, NH
207.523.1247
dgreen@oakhurstdairy.com
B20-B50

Steve Pesci
University of New Hampshire
Durham, NH
603.862.4207
Stephen.pesci@unh.edu
B20

Bob Kuhsel
White Mountain Biodiesel, LLC
North Haverhill, NH
603.728.7351
robertkuhsel@yahoo.com
B20-B100

RI's Biodiesel Fleet Champions

Randy and Jamie Lohr
Guardian Fuel and Energy Systems
Westerly, RI
401.596-6566
jlohr@guardianfuel.com, rlohr@guardianfuel.com
B15

Jim Malloy
T.H. Malloy and Sons
Cumberland, RI
401.692.1619
malloybiodiesel@gmail.com
B20-B99

Bob Morton
Newport Biodiesel
Newport, RI
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bob@newportbiodiesel.com
B100

VT's Biodiesel Fleet Champions

John Williamson
State Line Farm
North Bennington, VT 05257
802.447.7200
B20

Jim Malloy
Black Bear Biodiesel
Plainfield, VT 05667
802.999.2380
jimblackbearbiodiesel@gmail.com
B100

Appendix 4

National Clean Fleets Partners

Advanced Disposal
ampCNG
Aramark
AT&T
Best Buy
CHS, Inc.
Coca-Cola
Enterprise Holdings
FedEx
Frito-Lay
GE
Johnson Controls
Kwik Trip
OSRAM Sylvania
Pacific Gas and Electric Company
PepsiCo
Ryder
Schwan's Home Service
Staples
ThyssenKrupp Elevator
Time Warner Cable
UPS
Veolia Environmental Services
Verizon
Waste Management

Rebolledo, Dolores

From: Smith, Mark [Mark.Smith@EE.Doe.Gov]
Sent: Wednesday, September 18, 2013 5:03 PM
To: 'cc-partners@lists.nrel.gov'
Cc: 'Wendy Lucht'; Rebolledo, Dolores
Subject: New England Biodiesel Regional Workgroup

I am writing to you on behalf of the New England Biodiesel Regional Workgroup.

Formed in 2013 as part of a grant provided by the US Department of Energy, the workgroup addresses a comprehensive list of issues relative to biodiesel production and distribution in New England. They are comprised of the **Clean Cities Coordinators** from Maine, Vermont, New Hampshire, Massachusetts and Rhode Island. Also included in this workgroup are the biodiesel producers in the region.

The focus of the workgroup is to expand the use of biodiesel as a motor fuel in New England, identify and develop strategies to address barriers to states biodiesel use, and develop education strategies to build awareness, support and increase usage of the fuel.

If you currently operate, or are considering operating, biodiesel in New England, the respective Clean Cities Coordinators would be happy to engage with you directly to discuss the availability and reliability of biodiesel in the area. I am attaching a roster for your convenience.

Regards,
Mark

Mark S. Smith
US Department of Energy (EE-2G)
National Clean Cities Program
Vehicle Technologies Deployment Manager
1000 Independence Ave SW
Washington, D.C. 20585

Phone: 202-287-5151
Fax: 202-586-2476
Email: mark.smith@ee.doe.gov

9/23/2013

Appendix 5

Federal and State Laws and Incentives

Expired Federal Tax Credits

Biodiesel Income Tax Credit

Expired: 12/31/2014

A taxpayer that delivers pure, unblended biodiesel (B100) into the tank of a vehicle or uses B100 as an on-road fuel in their trade or business may be eligible for an incentive in the amount of $1.00 per gallon of biodiesel, agri-biodiesel, or renewable diesel. If the biodiesel was sold at retail, only the person that sold the fuel and placed it into the tank of the vehicle is eligible for the tax credit. The incentive is allowed as a credit against the taxpayer's income tax liability. Claims must include a copy of the certificate from the registered biodiesel producer or importer that: identifies the product; specifies the product's biodiesel, agri-biodiesel, and/or renewable diesel content; confirms that the product is properly registered as a fuel with the U.S. Environmental Protection Agency (EPA); and confirms that the product meets the requirements of ASTM specification D6751. Renewable diesel is defined as liquid fuel derived from biomass that meets EPA's fuel registration requirements and ASTM specifications D975 or D396; the definition of renewable diesel does not include any fuel derived from co-processing biomass with a feedstock that is not biomass. This tax credit is applicable to fuel delivered between January 1, 2005, and December 31, 2013. For more information about claiming the credit, see IRS Forms 637 and 8864, which are available on the IRS Forms and Publications website. For information about registering with the EPA, see the EPA Forms for Registration and Reporting Fuels and Fuel Additives website. (Reference Public Law 112-240 and 26 U.S. Code 40A)

Biodiesel Mixture Excise Tax Credit

Expired: 12/31/2014

A biodiesel blender that is registered with the Internal Revenue Service (IRS) may be eligible for a tax incentive in the amount of $1.00 per gallon of pure biodiesel, agri-biodiesel, or renewable diesel blended with petroleum diesel to produce a mixture containing at least 0.1% diesel fuel. Only blenders that have produced and sold or used the qualified biodiesel mixture as a fuel in their trade or business are eligible for the tax credit. The

incentive must first be taken as a credit against the blender's fuel tax liability; any excess over this tax liability may be claimed as a direct payment from the IRS. Claims must include a copy of the certificate from the registered biodiesel producer or importer that: identifies the product; specifies the product's biodiesel, agri-biodiesel, and/or renewable diesel content; confirms that the product is properly registered as a fuel with the U.S. Environmental Protection Agency; and confirms that the product meets the requirements of ASTM specification D6751. Renewable diesel is defined as liquid fuel derived from biomass that meets EPA's fuel registration requirements and ASTM specifications D975 or D396; the definition of renewable diesel does not include any fuel derived from co-processing biomass with a feedstock that is not biomass. This tax credit is applicable to fuel blended between January 1, 2005, and December 31, 2013. For more information about claiming the credit, see IRS Publication 510 *(PDF)* and IRS Forms 637, 720, 4136, 8849, and 8864, which are available on the IRS Forms and Publications website. For information about registering with the EPA, see the EPA Forms for Registration and Reporting Fuels and Fuel Additives website. (Reference Public Law 112-240 and 26 U.S. Code 6426)

Alternative Fuel Infrastructure Tax Credit

Expired: 12/31/2014

Fueling equipment for natural gas, liquefied petroleum gas (propane), electricity, E85, or diesel fuel blends containing a minimum of 20% biodiesel installed between January 1, 2006, and December 31, 2013, is eligible for a tax credit of 30% of the cost, not to exceed $30,000. Permitting and inspection fees are not included in covered expenses. Fueling station owners who install qualified equipment at multiple sites are allowed to use the credit towards each location. Consumers who purchased qualified residential fueling equipment prior to December 31, 2013, may receive a tax credit of up to $1,000. Unused credits that qualify as general business tax credits, as defined by the Internal Revenue Service (IRS), may be carried backward one year and carried forward 20 years. For more information about claiming the credit, see IRS Form 8911, which is available on the IRS Forms and Publications website. (Reference Public Law 112-240, 26 U.S. Code 30C and 38, and IRS Notice 2007-43 *(PDF)*)

Biodiesel Mandates by State:

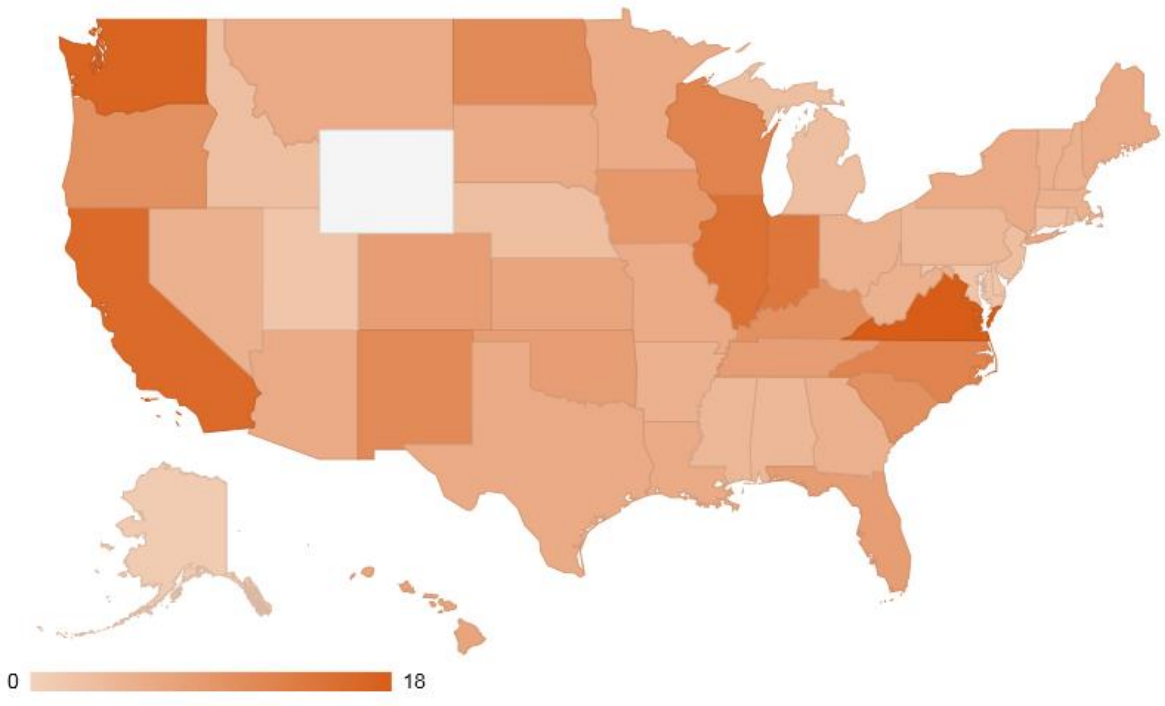
	State Mandates		**State Grants**
Alabama	No		Some
Alaska	No		no
Arizona	Some		no
Arkansas	Some	B2 state vehs conditional	Some
California	Some		Some
Colorado	Some	B20 state vehs conditional	Some
Connecticut	**Some**		**Some**
Delaware	Some		no
DC	no		Some
Florida	Some		Some
Georgia	Some		Some
Hawaii	Some	Must give preference	no
Idaho	Some		Some
Illinois	B5	govt, public transit	B11 tax exemption
Indiana	Some	B2 govt/state	Special fuel tax exemption
Iowa	Some		Some
Kansas	Some	B2 state vehs conditional	Some
Kentucky	Some		Some
Louisiana	Some	B2 conditional	Some
Maine	**Some**		**Some**
Maryland	Some	B5 50% of all state vehs conditional	Some
Massachusetts	**Some**		**Some**
Michigan	Some		Some
Minnesota	B10	to increase to B20 in 2018 conditional	Some
Mississippi	Some		Some
Missouri	Some	B5 75% of all state vehs conditional	Some
Montana	Some		no
Nebraska	Some		Some
Nevada	Some		no
New Hampshire	**Some**	**B5 conditional**	**no**
New Jersey	Some		no
New Mexico	B5		Some
New York	Some		Some
North Carolina	Some	B20 condtnl.	Some

North Dakota	Some		Some	
Ohio	Some		Some	
Oklahoma	Some		Some	
Oregon	Some		Some	Tax exemption
Pennsylvania	B2	Up to B20 conditional	Some	
Rhode Island	**Some**		**Some**	
South Carolina	B5	State owned fueling facilities	Some	
South Dakota	Some		Some	
Tennessee	Some		Some	Limits blend ratio on retail pumps
Texas	Some		Some	
Utah	Some		Some	
Vermont	**Some**	**B5 state vehicles**	**Some**	
Virginia	Some	B5 state vehicles conditional	Some	
Washington	B2	All biodiesel sold	Some	
West Virginia	Some		Some	
Wisconsin	Some		Some	
Wyoming	No		no	

Source: www.afdc.energy.gov/fuels/laws/BIOD

Biodiesel Incentives and Laws, by State

Source: http://www.afdc.energy.gov/data/search?q=biodiesel#10372



Maine Laws and Incentives for Biodiesel

Laws and Regulations

Biodiesel-Blended Diesel Documentation Requirement

A person that sells or transfers a title to a biomass-based diesel or biodiesel blend for resale purposes must document the transfer. The document may be in the form of an invoice, bill of sale, or other written document, and must include the name of the transferor, transferee, date of transfer, volume in gallons of the product transferred, and the amount of biomass-based diesel contained in the product. The transfer document must be kept for a period of four years from the transfer date. (Reference Maine Revised Statutes Title 10, Section 1663)

Alternative Fuel Tax Rates

Blended fuels that contain at least 10% gasoline or diesel are taxed at the full tax rates of gasoline ($0.30 per gallon) or diesel ($0.312 per gallon). Alternative fuel tax rates are as follows:

Fuel	Tax Rate
E85	$0.30 per gallon
Biodiesel blends of up to 90%	$0.312 per gallon
Biodiesel blends of 90-100%	$0.287 per gallon
Propane/liquefied petroleum gas	$0.219 per gallon
Compressed natural gas (CNG)	$0.243 per 100 cubic feet
Liquefied natural gas	$0.178 per gallon
Hydrogen	$0.07 per 100 cubic feet
Hydrogen CNG	$0.208 per 100 cubic feet

For more information see the Maine Revenue Services website. (Reference Maine Revised Statutes Title 36, Section 3203)

Provision for Establishment of Clean Fuel Vehicle Insurance Incentives

An insurer may credit or refund any portion of the premium charged for an insurance policy on a clean fuel vehicle in order to encourage its policyholders to use clean fuel vehicles, as long as insurance premiums on other vehicles are not increased to fund these credits or refunds. (Reference Maine Revised Statutes Title 10, Sections 963-A, and Title 24-A, Section 2303-B)

State Plan to Reduce Petroleum Consumption

The Maine Governor's Energy Office, in consultation with the Efficiency Maine Trust, must develop a plan to reduce fossil fuels, with a primary focus on reducing oil consumption, in all sectors of the economy with the overall goal of reducing fossil fuel and oil consumption in the state by at least 20% and 50%, based on 2012 levels, by 2020 and 2050, respectively. The plan must prioritize the use of alternative energy sources for heating and transportation. The Office must include an update on the progress towards meeting these goals in the state's biennial comprehensive energy plan. (Reference Maine Revised Statutes Title 2, Section 9)

State Incentives

Biofuels Production Tax Credit

A certified commercial biofuel producer is eligible for an income tax credit of $0.05 per gasoline gallon equivalent of biofuel produced for use in motor vehicles or otherwise used as a substitute for liquid fuels. Biofuel is defined as ethanol, biodiesel, hydrogen, methanol, or any other transportation fuel derived from agricultural crops or residues, or from forest products or byproducts. A taxpayer claiming this credit must receive a letter from the Maine Department of Environmental Protection that certifies the biofuels produced during the taxable year are eligible for the tax credit. For biofuels blended with petroleum or other non-biofuels, the credit is allowed only on the biofuels portion of that blend. Any portion of unused credits may be carried over for up to 10 taxable years. (Reference Maine Revised Statutes Title 36, Section 5219-X)

Biodiesel Fuel Tax Exemption

An individual that produces biodiesel for personal use or use by a member of his or her immediate family is exempt from the state fuel excise tax. (Reference Maine Revised Statutes Title 36, Section 3203 and 3204-A)

Massachusetts Laws and Incentives for Biodiesel

Laws and Regulations

Alternative Fuel Offering Requirement

The Massachusetts Department of Transportation may not enter into, renew, or renegotiate a contract with a fuel provider for services on the Massachusetts Turnpike without requiring the provider to offer alternative fuel. Alternative fuel is defined as an energy source that is used to power a vehicle and is not gasoline or diesel. (Reference House Bill 4371, 2012, and Massachusetts General Laws Chapter 6C, Section 75 and Chapter 90, Section 1)

Voluntary Biofuels Program

In place of the formal Biodiesel Blend Mandate, the Massachusetts Department of Energy Resources (DOER) will launch a voluntary biofuels program through which DOER will work with biodiesel suppliers to certify biofuels. Lessons learned from this voluntary program will provide the basis for future expansion and full implementation of a state biofuels mandate. For more information, refer to the June 2010 Massachusetts Advanced Biofuels Mandate Program Announcement *(PDF)*.

State Hybrid Electric (HEV) Alternative Fuel Vehicle (AFV) Acquisition Requirements

When purchasing new motor vehicles, the Commonwealth of Massachusetts must purchase HEVs or AFVs to the maximum extent feasible and consistent with the ability of such vehicles to perform their intended functions. HEVs and AFVs must be acquired at a rate of at least 5% annually for all new motor vehicle purchases so that not less than 50% of the motor vehicles the Commonwealth owns and operates will be HEVs or AFVs by 2018.

State fleets must also acquire AFVs according to the requirements of the Energy Policy Act (EPAct) of 1992 and the Massachusetts Office of Vehicle Management (OVM) must approve any light-duty vehicle acquisition. All agencies must purchase the most economical, fuel-efficient, and low emission vehicles appropriate to their mission. OVM, in collaboration with the Massachusetts Department of Energy Resources, will set new minimum standards for vehicle fuel economy and work with agencies to acquire vehicles that provide the best value for the Commonwealth on a total cost of ownership basis.

By July 1 of each year, OVM must compile a report detailing the progress made towards these requirements.

(Reference Massachusetts General Laws Chapter 7, Section 9A; Executive Order 388, 1996; and Massachusetts Executive Office of Administration and Finance Administrative Bulletin 10, 2010)

Biodiesel Blend Mandate

Pursuant to state law, all diesel motor vehicle fuel and all other liquid fuel used to operate motor vehicle diesel engines in Massachusetts must contain at least 2% renewable diesel fuel by July 1, 2010; 3% renewable diesel fuel by July 1, 2011; 4% renewable diesel fuel by July 1, 2012; and 5% renewable diesel fuel by July 1, 2013. For these purposes, eligible renewable diesel fuel includes diesel fuel that is derived predominantly from renewable biomass and yields at least a 50% reduction in lifecycle greenhouse gas (GHG) emissions relative to the average lifecycle GHG emissions for petroleum-based diesel fuel sold in 2005. The Massachusetts Department of Energy Resources (DOER) must also study the feasibility, benefits, and costs of applying the percentage mandates on a statewide average basis rather than for every gallon of diesel motor fuel sold.

DOER may delay the implementation of the biodiesel blend mandate if DOER determines that it is not feasible to meet the mandate due to lack of supply, lack of blending facilities, or unreasonable cost. As of June 2010, DOER suspended the formal requirement on grounds of unreasonable cost.

(Reference Massachusetts General Laws Chapter 94, Section 295G1/2)

State Agency Alternative Fuel Use Requirement

All Massachusetts agencies must use a minimum of 15% biodiesel (B15) in all on- and off-road diesel engines, provided that the Commonwealth Office of Vehicle Management and other appropriate agencies have determined that a B15 goal is appropriate. The Massachusetts Department of Energy Resources (DOER) will set guidelines for a minimum required use of E85 in state flexible fuel vehicles, depending on the availability of the fuel in the state. Agencies may apply for exemptions from the biodiesel and E85 fuel use requirements if the agencies demonstrate that the alternative fuel is not available within a reasonable distance and/or the price of the alternative fuel is cost prohibitive, as determined by DOER. (Reference Massachusetts Executive Office of Administration and Finance Administrative Bulletin 13, 2006)

The state of Massachusetts has a statewide contract for the purchase of Biodiesel Blends (ENE33[35]). The benefits and Cost savings for state and local agencies are as follows:

- Competitive pricing
- Four Biodiesel blends available B5,B10.B15 and B20
- Qualified and experienced vendor
- Prompt pay discount
- Lower differential pricing for the purchase of 8000 gallons or more.

[35] www.mass.gov/anf/docs/osd/uguide/ene33-09-24-14.pdf

New Hampshire Laws and Incentives for Biodiesel

The list below contains summaries of all New Hampshire laws and incentives related to Biodiesel.

Laws and Regulations

State Energy Strategy Development

The New Hampshire Office of Energy Planning, in consultation with the New Hampshire Energy Advisory Council, prepared a 10-year energy strategy for the state. Among other issues, the strategy addresses the impact of transportation policies and programs on electricity energy needs in the state. The recommendations in the strategy include enabling and encouraging adoption of plug-in electric vehicles, and reducing unnecessary idling. For more information, including the final strategy, visit the State Energy Strategy website. (Reference Senate Bill 191, 2013)

Alternative Fuels Taxation Study Commission

The Taxation of Alternative Fuel and Electric-Powered Vehicles Commission (Commission) was established to study and report findings and recommendations to ensure hybrid electric, alternative fuel, and electric motor vehicles equitably contribute revenue to maintain the state's highways and bridges. The Commission must submit a report of its findings to state officials. (Reference House Bill 1144, 2012)

Biodiesel Distributor License and Recordkeeping Requirements

Any person who refines, distills, prepares, blends, manufactures, or purchases biodiesel on which the road tax has not been paid and who is not a licensed and bonded distributor must become licensed with the New Hampshire Department of Safety (DOS). An annual license fee of $25 applies. Any licensed biodiesel refiner, distiller, blender, manufacturer, or purchaser of more than 10,000 gallons of biodiesel per month must file a bond with DOS. All biodiesel distributors must maintain and keep records for a period of four years to verify all biodiesel sold within the state meets ASTM D6751 specifications. Failure to demonstrate compliance may result in loss of the license. (Reference New Hampshire Revised Statutes 260:36-d, 260:38, and 260:43-b)

Biodiesel Blend Purchase Requirement

Diesel fuel that the New Hampshire Department of Transportation (DOT) purchases through the Motor Fuel Inventory Fund must contain at least 5%

biodiesel (B5). Compliance with this requirement is at DOT's discretion only if the fuel is unavailable or more expensive than 100% petroleum diesel. DOT is encouraged to purchase diesel fuel containing up to 20% biodiesel (B20) when the fuel is acceptable for use. DOT may sell the fuel to all state departments and institutions, political subdivisions of the state, and eligible nonprofit corporations under contract with DOT to transport the general public and federal government agencies. (Reference New Hampshire Revised Statutes 228:24-a)

Biodiesel Definition

Biodiesel is a renewable special fuel that is composed of mono-alkyl esters of long chain fatty acids, derived from vegetable oils or animal fats, and meets the requirements of the ASTM specification D6751. (Reference New Hampshire Revised Statutes 259:6-a)

Rhode Island Laws and Incentives for Biodiesel

Laws and Regulations

State Agency Coordination to Address Climate Change

The Rhode Island Climate Change Coordinating Council (Council) was established to coordinate efforts between state agencies to reduce greenhouse gas (GHG) emissions. With assistance from the Council, state agencies will develop programs to encourage state employees to reduce vehicle miles traveled and use public transportation when available. The Council will also work with municipalities to encourage sustainability; identify federal, state, and private funding opportunities that can be leveraged to reduce emissions in Rhode Island; and develop GHG emissions reduction strategies. The Council will submit a plan with suggested strategies for GHG emissions reduction activities to the governor no later than December 31, 2016. (Reference Senate Bill 2952, 2014, and Rhode Island General Laws 42-6.2)

Biofuels Promotion

The Biofuels Study Commission (Commission) was established to study the feasibility and effectiveness of incentives that promote the development and use of advanced biofuels in the state, including production credits, feedstock incentives, and direct use consumer credits. The Commission will also explore the possibility of entering into an agreement with the states participating in the Regional Greenhouse Gas Initiative to develop and implement a low carbon fuel standard for transportation fuels. The Commission must report results and recommendations to the General Assembly at least every two years beginning January 2012. (Reference Rhode Island General Laws 31-36.2)

Alternative Fuel Vehicle (AFV) and Hybrid Electric Vehicle (HEV) Acquisition Requirements

To reduce fuel consumption and pollution emissions, and purchase vehicles that provide the best value on a lifecycle cost basis, the state must take the following actions:

- At least 75% of state motor vehicle acquisitions must be AFVs, and the remaining 25% must be HEVs to the greatest extent possible;
- All new light-duty trucks in the state fleet must achieve a minimum city fuel economy of 19 miles per gallon (mpg) and achieve at least a Low Emission Vehicle certification, and all new passenger vehicles in the state fleet must achieve a minimum city fuel economy of 23 mpg;

- All state agencies must purchase the most economical, fuel-efficient, and lowest emission vehicles appropriate to meet requirements and discourage the purchase of sport utility vehicles;
- All state agencies must purchase low rolling resistance tires with superior tread life for state vehicles when possible; and
- All state vehicles must be maintained according to manufacturer specifications, including specified tire pressures and ratings.

The state must also prepare an annual report to the governor on compliance with these goals. (Reference Executive Order 05-13 *(PDF)*, 2005)

State Incentives

Biodiesel Tax Exemption

Biodiesel is exempt from the $0.30 per gallon state motor fuel tax. Biodiesel may be blended with other fuel for use in motor vehicles, but only the biodiesel portion of the blended fuel is exempt. Biodiesel is defined as fuel that is derived from vegetable oils or animal fats and conforms to ASTM D6751 specifications for use in diesel engines and results in employment at a manufacturing facility for biodiesel fuel. (Reference Rhode Island General Laws 31-36-1)

Vermont Laws and Incentives for Biodiesel

Laws and Regulations

Alternative Fuel Vehicle (AFV) User Fee Study

The Vermont Agency of Transportation, in consultation with the Joint Fiscal Office, the Motor Vehicle Department, Department of Taxes, and Department of Public Service, analyzed and reported on options for user fees and fee collection mechanisms for AFVs using fuels that are not currently taxed. In addition, the Committee on Transportation Funding released a report on estimated transportation revenues over five years and potential new sources of revenue, including a tax based on vehicle miles traveled. For more information see the Vermont Transportation Funding Options Final Report *(PDF)*. (Reference House Bill 770, 2012)

State Agency Energy Plan Transportation Requirements

The Vermont Agency of Administration developed and oversees the implementation of the State Agency Energy Plan (Plan). The Agency of Administration must modify the Plan as necessary and re-adopt it on or before January 15 of each fifth year. As specified in the 2010 Plan *(PDF)*, the Vermont Agency of Transportation must continue to use 5% biodiesel (B5) in its fleet of heavy-duty vehicles. The Vermont Department of Buildings and General Services must continue to use hybrid electric vehicles and Partial Zero Emission Vehicles in its fleet, while adjusting purchases based on annual fleet selection monitoring and available vehicle technology. All state agencies must investigate the use of additional alternative fuel and advanced technology vehicles, as well as the necessary fueling infrastructure, such as incorporating electric vehicle supply equipment at appropriate state facilities.

The Plan specifies the responsibilities of the Climate Neutral Working Group (CNWG). All state government agencies, offices, and departments must purchase the most fuel-efficient vehicles available in each vehicle class according to specifications set by the CNWG. The CNWG must consider vehicles that meet high fuel economy standards and emit reduced levels of greenhouse gases, criteria pollutants, and hazardous air contaminants. Additionally, the CNWG must expand education and tracking related to anti-idling campaigns for state fleet vehicles and private sector vehicles operating on state owned property, and conduct a survey to determine the level of government employee participating in carpooling, vanpooling, and other commuting options. Progress towards these goals is outlined in the CNWG Biennial Reports.

(Reference Vermont Statutes Title 3, Chapter 45, Section 2291, and Executive Order 15-12, 2012)

Alternative Fuel Vehicle (AFV) Acquisition Requirements

The Vermont Department of Buildings and General Services must consider AFVs when purchasing vehicles for state use, provided that the alternative fuel is suitable for the vehicle's operation, is available in the region where the vehicle will be used, and is competitively priced with conventional fuels. (Reference Vermont Statutes Title 29, Chapter 49, Section 903)

State Incentives

School Bus Pilot Program

The Vermont Department of Motor Vehicles will approve up to three participants for a pilot program to operate Type II school buses that are retrofitted with an auxiliary fuel tank to enable the use of biodiesel, waste vegetable oil, or straight vegetable oil. Eligible buses must pass inspection in accordance with the state School Bus Periodic Inspection Manual and comply with the Federal Motor Vehicle Safety Standards. A Type II school bus is defined as a school bus with a manufacturer's rated seating capacity of more than 10 and fewer than 16 passengers, including the operator. The pilot program will expire on September 1, 2015. (Reference House Bill 510, 2013, and Vermont Statutes Title 23, Chapter 1, Section 4)

Alternative Fuel and Advanced Vehicle Research and Development Tax Credit

Vermont businesses that qualify as a high-tech business involved exclusively in the design, development, and manufacture of alternative fuel vehicles, hybrid electric vehicles, all-electric vehicles, or energy technology involving fuel sources other than fossil fuels are eligible for up to three of the following tax credits: 1) payroll income tax credit; 2) qualified research and development income tax credit; 3) export tax credit; 4) small business investment tax credit; and 5) high-tech growth tax credit. Certain limits and restrictions apply. This incentive expires December 31, 2016. (Reference Vermont Statutes Title 32, Chapter 151, Section 5930a, c, f, g, and k)

Appendix 6

BQ 9000 Conference Call with National Biodiesel Board

May 8, 2014

On the call: Scott Fenwick (NBB),Jennifer Puser, Dolores Rebolledo, Bob Kuhsel, Bruce LaMarre, Michelle Broussard, Andrew Davison, Karl Radune, Bob Morton, Wendy Lucht and Susan Olson.

Dolores welcomed the callers and introduced Scott Fenwick of NBB to answer questions about BQ-9000 certification.

BK – Do you have a boiler plate we can use for creating the processes?

SF – We did and it was on our website but we no longer have it as companies would download the document and put their names on it and during their on-site audit it was clear they had not reviewed the document thoroughly. We have consultants to help with implementation and have training courses to review the program.

BK – Do you have a preferred vendor to do the testing?

SF – There's a list of BQ-9000 labs on the website.

BK – Samples can vary from lab to lab.

SF- Results from each lab can differ in varying degrees. While we use these numbers we stress looking at trends.

BM- Do you see us at an advantage by doing this (testing) as a group?

SF – It's hard to know without knowing each one of you. Don't overthink the program. Create procedures based on how your staff does the task. Have them write their own procedure.

BM – Does everyone have to their own testing?

SF – Yes but perhaps if you all use the same lab you can get a volume discount.

BM- Do our dues go toward the cost of the BQ-9000 certification?

SF- Yes, if you have been a member for 24 months you can apply those funds toward your BQ-9000.

BM – Who does the certification?
SF – We do. It starts with a desk audit from one of our in-house auditors. They read the company's policies and procedures and notify of any corrections that need to be made. Then the auditor does an on-site audit. Once the audit report is done, the Commission reviews it. The report does not identify the company or the auditor. This process takes 10 months to a year.
DR – Who pays for the audit?
SF- The cost is billed back to the company.
DR – What other costs are associated?
SF- Testing outside the company – monthly and critical testing.
BM- Genscape?
SO- We are helping producers with resources.
BM – We have a quality assurance machine. Is this ASTM okay?
SF – It is for some tests, not all.
BM- Will more tests from the QA machine count in the future?
SF- It's up to the group to decide if more tests would count.
BM – NBB no longer tells audiences to buy just BQ-9000 product but they do encourage it.
BL- We do 6,000 gallon batches – can we do composite testing on many batches?
SF- Yes but that's a lot of biodiesel that can't be moved until the testing comes back. You must have a level of confidence to sell the batch before the testing results and if you intend to do this you must have a recall procedure in the event the fuel does not pass the tests.
BK- What are the costs?
SF- The application cost can be delayed. The audit costs about $3,000 and there are the internals costs – ongoing costs of testing.
KR – Who takes the samples?
SF-The producers do.

SF- I suggest we have another meeting where we all can pull up the producer standards to explain more about each requirement and associated costs. It would take 2-3 hours to review.
AD – Have you thought of a program that would something like BQ-9000, quality program that the smaller producers could manage?
SF – We are busy with the retailer program but we would be interested in a lighter program. Can you pull together what you think it should look like and I can take that and try to sell it to our vehicle OEMs.
You might want to check out Iowa Central Community College for testing and collaborate to get a volume discount.
KR – I have a relationship with UCONNs testing program and can look into a volume discount for the five families.

Appendix 7

New England Clean Cities & Biodiesel Producers Workgroup Roster

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Appendix 1

Resources

Why Chance our Future on only one Fuel?
http://americasadvancedbiofuel.com/

Use and Care Guide http://www.biodiesel.org/docs/using-hotline/nrel-handling-and-use.pdf?sfvrsn=4

US Dept of Energy Biodiesel Benefits and Considerations
www.afdc.energy.gov/fuels/biodiesel_benefits.html

Dr.Dan's Biodiesel http://drdansbiodiesel.com/

Dr. Dan's blog (outreach to customers to enhance their biodiesel experience).

Pump Maintenance and Winter Weather advice

Month Day, Year

Dear Dolores,

After some brief downtime for maintenance, our 24/7 credit card pump is open again.

Hey It's cold out!! Our Biodiesel is good down to the mid 20's, so take precautions when the temperatures get below freezing. In a car that gets out running around, is not parked in a super cold spot and gets some sun during the day you should be fine. Trucks tend to be more temp sensitive because of exposed and unheated fuel components. When in doubt add some high quality filtered diesel and add some cold weather additive to the diesel.

Where do you get high quality filtered diesel? A high volume retailer like a truck stop! Unless you can see a big filter on the side of the pump where the hose comes out it is more than likely to be insufficiently filtered, allowing the possibility of getting contamination such as dirt, water and sludge into your fuel system and potentially plugging your fuel filter. The small fuel filter on your vehicle filters between 2 to 10 microns - so the fuel that you buy should be filtered to at least 10 microns or less. There are truck stops near the port and highways, such as in the Sodo. Auto part stores sell Diesel fuel additives, you want one that says Antigel or cold weather additive. I like the Stanadyne or PowerService brands

Happy Holidays!
Dr. Dan

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