



Petroleum Replacement Promotion

2015 Legislative Report

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Pursuant to Minn. Stat. § 3.197, the cost of preparing this report was approximately \$5,000.

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Executive Summary

Minnesota legislation includes the goal to replace 14 percent of state spark ignition engine fuel consumption with renewable fuels by 2015, increasing to 30 percent replacement in 2025. In addition to this, the state has a biodiesel mandate of 10% in the summer months of April through September, and 5% from October through March, with a scheduled jump to 20% in the summer months beginning in 2018. The Minnesota Department of Agriculture (MDA) is charged with coordinating other agencies and stakeholders to report to the legislature on activities and recommendations for pursuing the state's petroleum replacement goal and biodiesel mandate activities. Most of the biodiesel reporting will be included in a separate report to the legislature that will also be issued for the upcoming session.

Minnesota is engaged in numerous efforts for increasing the state's renewable fuel use. The American Lung Association in Minnesota (ALAMN) administers ethanol blender pump and E85 pump infrastructure grants funded by project partners. The state has in the past worked to develop additional capacity for biodiesel blending infrastructure. Further actions should be pursued to increase the number of flex-fuel vehicles in Minnesota and to continue incentivizing retailers to increase infrastructure for dispensing renewable fuels.

The state is working to expand renewable fuel options for Minnesotans. The Minnesota Department of Agriculture (MDA) has supported federal efforts to increase the allowable content of ethanol in gasoline from 10 to 15 percent. The state also continues to expand its E15, E85, and blender pump outlets through various outreach and incentive efforts; over the past two years this has been done through use of Agriculture Growth, Research, and Innovation (AGRI) funds.¹

Minnesota legislation continues to allow for the use of gasoline without ethanol in certain applications; however, the majority of consumers utilize E10. The state should consider a similar policy for maintaining the use of E10 in certain applications as higher ethanol blends are implemented in Minnesota.

Minnesota's Fleet Committee reports that the state's fleet of approximately 4,200 flex-fuel vehicles has decreased its use of E85 by more than 370,000 gallon. E85 use in the state fleet peaked at over 965,000 gallons in 2011 and has been steadily falling since then. Other large fleets in Minnesota are also engaged in efforts to utilize renewable fuels—including the University of Minnesota, various counties and cities, and U.S. offices.

The average net cost of a gallon of pure ethanol to the blender has remained lower than that of a gallon of regular unleaded gasoline by a daily average of 27 cents in 2014 at the Minneapolis/St. Paul terminals, with a price difference of 52 cents between ethanol at the plant² and E10 at the rack. The price for intermediate ethanol blends has also been lower than that of gasoline—for instance, in 2014 the average monthly price of E20 to the consumer has been approximately 11 cents lower than that of retail price of unleaded-octane 87 E10 gasoline. The price of biodiesel has been impacted by policy changes at the federal level for 2014, now relying entirely on the Renewable Fuel Standard (RFS2) compliance and the associated Renewable Identification Number (RIN) values for any adjustment to price. The state can continue to work towards maintaining affordable prices for liquid fuels by monitoring market conditions, working to give consumers more fuel choice with biofuels and responding with appropriate policy actions.

¹ M.S. § 41A.12.

² As reported in the weekly reports from the [Agricultural Marketing Service](#).

With the revision to the Petroleum Replacement Statute in 2013, additional items were added to the recommendations and actions to be taken by the commissioners of the MDA, Commerce, and the Minnesota Pollution Control Agency (MPCA) for facilitating the production and use of advanced biofuels in the state, and the development of procedures for reporting the amount and type of biofuel used under Minnesota's biofuel mandate in M.S. § 239.791. Strategizing about these and the other action items, along with eliminating barriers to the use of greater biofuel blends in the state are the mission of the Biofuels Task Force that was also formed as part of the revised legislation.

Introduction

This report is submitted pursuant to Minnesota Statutes §239.7911, subd. 2:

Promotion of renewable liquid fuels.

- (a) The commissioner of agriculture, in consultation with the commissioners of commerce and the Pollution Control Agency, shall identify and implement activities necessary to achieve the goals of subdivision 1. Beginning November 1, 2005, and continuing through 2015, the commissioners, or their designees, shall convene a task force pursuant to section 15.014 that includes representatives from the renewable fuels industry, petroleum retailers, refiners, automakers, small engine manufacturers, and other interested groups. The task force shall assist the commissioners in carrying out the activities in paragraph (b) and eliminating barriers to the use of greater biofuel blends in this state. The task force must coordinate efforts with the NextGen Energy Board, the biodiesel task force, and the Renewable Energy Roundtable and develop annual recommendations for administrative and legislative action.

Background

Minnesota currently blends 10 percent biofuel (currently ethanol via E10) into gasoline year-round and 10 percent biodiesel (B10) in summer months and five percent in winter months into #2 diesel fuel, as required by statute.^{3,4} Minnesota is also home to more E85 stations than any other state with about 11 percent of stations offering the fuel compared to less than 2% nationwide. From January of 2013 through September of 2014, just over 33 million gallons of E85 have been sold in the state.^{5,6}

Minnesota law also requires continued growth in renewable fuels consumption, including a mandate for the highest percent biofuel authorized in a waiver granted by the U.S. Environmental Protection Agency for all spark ignition motor vehicles, and biodiesel blends rising to 20% in summer months in 2018.⁷ In addition to these requirements in statute, Minnesota Statutes §239.7911 outline the state's petroleum replacement goals (specific to spark ignition engines) that target:

- (1) 14 percent of the total gasoline sold or offered for sale in the state be comprised of biofuel by December 31, 2015;
- (2) 18 percent of the gasoline supply be comprised of biofuel by 2017;
- (3) 25 percent of the gasoline supply be comprised of biofuel by 2020; and

³ See MS §239.791, subd. 1(a) (Oxygenated Gasoline) and MS §239.77, subd. 2(a) (Biodiesel Content Mandate).

⁴ In January 2010, the Minnesota Department of Commerce (MDOC) temporarily waived the requirement that #1 diesel fuel be blended with biodiesel (B100) from through March 2010. The 2010 Minnesota Legislature implemented legislation allowing MDOC to extend this waiver for the winter months through March of 2012. In spring of 2012 the waiver was extended another 3 years to 2015 in statute (MS §239.77, subd. 3(c)). The B5 mandate still applies to #2 diesel fuel year-round, and in 2014 the waiver was extended to year-round and until May 1, 2020.

⁵ E85 is a blend of 51 to 85 percent ethanol (per ASTM D5798 and the U.S. Department of Energy) with gasoline and can be used in flex fuel vehicles only.

⁶ Minnesota Department of Commerce, [E85 Fuel Use Data](#).

⁷ MS §239.791, subd. 1(ii) and 1(2); MS §239.77, subd. 2.

- (4) 30 percent of the total gasoline sold or offered for sale in the state is comprised of biofuel by December 31, 2025.⁸

Legislative Requirements, Actions and Recommendations

Minnesota Statutes §239.7911, subd. 2(b) requires MDA to work with the commissioners of commerce and the Pollution Control Agency as well as industry stakeholders to develop legislative recommendations and actions that address Minnesota's petroleum replacement goal, as follows:

The activities of the commissioners under this subdivision shall include, but not be limited to:

- (1) developing recommendations for specific, cost-effective incentives necessary to expedite the use of greater biofuel blends in this state including, but not limited to, incentives for retailers to install equipment necessary to dispense renewable liquid fuels to the public;*
- (2) expanding the renewable-fuel options available to Minnesota consumers by obtaining federal approval for the use additional blends that contain a greater percentage of biofuel;*
- (3) developing recommendations to ensure that motor vehicles and small engine equipment have access to an adequate supply of fuel;*
- (4) working with the owners and operators of large corporate automotive fleets in the state to increase their use of renewable fuels;*
- (5) working to maintain an affordable retail price for liquid fuels;*
- (6) facilitating the production and use of advanced biofuels in this state; and*
- (7) developing procedures for reporting the amount and type of biofuel under subdivision 1 and section 239.791, subdivision 1, paragraph (c).*

This report comments on each of the requirements outlined in statute in the sections that follow.

Incentives for Retailers

(1) developing recommendations for specific, cost-effective incentives necessary to expedite the use of greater biofuel blends in this state including, but not limited to, incentives for retailers to install equipment necessary to dispense renewable liquid fuels to the public;

Renewable Fueling Infrastructure Grants

In the summer of 2013, the Minnesota Department of Agriculture partnered with the Minnesota Corn Research and Promotion Council (MCR&PC) to offer grants to service stations to install E15 and E85 compatible equipment. The MDA contributed \$1 million over the 2014-2015 biennium⁹ and the MCR&PC added \$2 million for a total grant pool of \$3 million. ALAMN was chosen to process grant applications and coordinate with the MDA on the separate contracts needed to distribute state money. Any service station in the state can apply, but certain selection criteria are set to determine the award offered to the grantee, including, but not limited to:

- Retailers located in the 7-county metro area

⁸ MS §239.7911, subd. 1.

⁹ The money from the Minnesota Department of Agriculture is part of the Agricultural Research, Growth, and Innovation Fund (Laws of Minnesota, Chapter 114, Article 1, Subd. 4).

- High sales volume for gasoline and high traffic locations
- Proximity of station to flexible fuel vehicle populations
- Number of fuel dispensers being converted, and
- Whether or not all pumps at the location are being converted.

Ideally, the most desired site has all of these qualities and is able to offer E15 and a higher blend of ethanol at every pump.

To date, 36 stations have been funded or are in the process of being funded, for a total of \$1.6 million.

Many of the sites receiving grants are uniting under the “Minnoco” brand, short for Minnesota Oil Company. Five of the six stations that have begun to sell fuel under that brand offer both E15 and a higher blend of ethanol (the higher blend for flexible fuel vehicles). Soon to be added will be another five locations, all offering E15 and higher ethanol blends. A second grant program also helped to assist in the ethanol infrastructure necessary for the conversion of some of the Minnoco sites. The “Prime the Pump” Grant Program, a program offered to larger retailer chains of petroleum retailers who seek to add E15 compatible infrastructure to their fuel mix, also bestowed a grant upon the Minnoco stations.

In 2010, ALAMN was awarded funding from the U.S. Department of Energy Clean Cities program for public E85 dispensing equipment installations which funded 15 installations through 2014. That program is now complete.

Biodiesel Blending Infrastructure

On November 28, 2012, Harms Oil Company of Sioux Falls, South Dakota, held their grand opening for a new biodiesel blending facility. Two 20,000 gallon underground storage tanks were installed; one is heated and can keep the B100 at 75°F throughout the winter months. When the warm biodiesel is injected into a tanker of #2 diesel, the warmth helps with the overall blending of the fuels. The opening of this facility, along with changes made to procedures the Department of Commerce’s Division of Weights and Measures uses to track the biodiesel content in shipment of biodiesel blends, allowed the state to act on the B10 requirement in Minn. Stat. 239.77 this past July 1.

As of December 31, 2013, the federal biodiesel blending credit was discontinued. This leaves the Renewable Fuel Standard (RFS2) and the state biodiesel blending mandate as the current mandates for biodiesel blending. Lower B100 prices, along with the trading of Renewable Identification Numbers (RINs-see definition on page 23) has added value to B100 throughout the past year. This has continued to allow biodiesel to be profitable for blenders outside the terminal and the rack. More about biodiesel RIN values will be covered in the “Maintaining Affordable Retail Prices for Liquid Fuels” section of this document.

Funding for biodiesel blending infrastructure has been discussed, but has yet to gain traction. An earlier grant program in the late 2000’s had no applicants for funds allotted to this purpose.

Update: E15 EPA Approval and Distribution Potential

E15, gasoline blended with 15% ethanol, was approved by the U.S. EPA in 2012 for sale and use in light duty vehicles model year 2001 and newer, which totals nearly 85% of the vehicles on the highway today. The first retail stations to offer E15 opened that summer in Kansas, Iowa and Nebraska.

The first Minnesota station, now branded Penn Minnoco in South Minneapolis, began offering E15 in October, 2013. At this time 18 retailers offer E15 for sale in Minnesota.

E15 offers a price discount and higher octane¹⁰ than regular unleaded-87, also known as E10. Some stations selling E10 may be able to offer E15 from their current dispenser through a dedicated hose or the E10 hose¹¹. Other retailers may simply need a retrofit kit for their existing dispenser, while others may need a new dispenser and/or other compatible underground infrastructure components that meet requirements for offering E15.

Since the fuel has been approved by the EPA, there have been a number of obstacles to its implementation:

- E15 cannot be sold to non-flex fuel vehicles from June 1 through September 15.
- E15 was not granted the one pound waiver by the EPA that is granted to E10. This means that it cannot be blended with the gasoline blendstock as the resulting blend would be greater than 9 pounds per square inch Reid Vapor Pressure (RVP is a measure of the evaporative emissions of a fuel), and would need to be blended with lower RVP gasoline blendstock over the summer months during the low RVP season.
- Issues with liability and the fuel are also a concern to some station owners, distributors, and other along the supply chain.
- Federal Law requires all underground storage systems to be compatible with the products they store. In implementing this requirement and following federal guidelines, the Minnesota Pollution Control Agency has published guidance on their website regarding compatible equipment that can be used to store and dispense E15, and other blends of ethanol greater than 10 percent. In general, the equipment must either be certified by a national testing laboratory (such as Underwriters Laboratory (UL)) or approved for use with the fuel by the manufacturer.

Ethanol trade associations such as Growth Energy and the Renewable Fuels Association have considerable data and research that supports the use of E15 as a mainstream fuel. E15 implementation provides a way to move ethanol beyond the 10% “blend wall” – the point that was reached nationally last year and that exists today where almost all the gasoline in the country is blended with 10% ethanol, thus saturating the domestic market in terms of ethanol use outside of E85 and higher blends of ethanol that can be used in flexible fuel vehicles.

Higher blends of ethanol are also being considered as one method of reaching the Corporate Average Fuel Economy (CAFE) standard set for 2025 of 54.5 miles per gallon in light duty vehicles. Higher blends of ethanol allow for higher octane fuel. Higher octane fuel allows for greater engine efficiency and smaller engine size, which, despite the lower energy value of ethanol contributing to a lower energy value of the resultant fuel, allows for more available energy in the final system.¹² E15, and the introduction of ethanol blender pumps and their associated infrastructure pave the way for such a fuel of the future. The Alliance of Automobile manufacturers, with this in mind, wrote to EPA Secretary Lisa

¹⁰ When ethanol is added to E10 regular gasoline (87 octane), the octane rating of E15 is approximately 88.5.

¹¹ E15 can be offered through the same hose as E10 if there is a dispenser where E10 only is offered from a single hose somewhere on the station property. E15, despite policy by the U.S. EPA allowing it to be sold through a flex hose on a blender pump if the customer purchases at least four gallons of fuel, has not been approved for that configuration in practice.

¹² Anderson, J.E., DiCicco, D.M., Ginder, J.M., Kramer, U., Leone, T.G., Raney-Pablo, H.E. and T.J. Wallington. High octane number ethanol–gasoline blends: Quantifying the potential benefits in the United States. *Fuel*, Vol. 97, July, 2012, pgs. 585-594.

Jackson in 2011 asking for consideration of high octane fuels using added ethanol when considering CAFE standards under review.¹³

RFS2 Update

On November 29, 2013, the U.S. EPA published its proposed volumes for obligated parties (Renewable Volume Obligations, or RVO's) under the RFS2 program, requesting comment through late January, 2014. In their proposal, volumes for cellulosic biofuel, advanced biofuel, and total renewable fuel were all reduced below the levels set in the original legislation passed by Congress in 2007, with the biomass-based diesel volume remaining constant for 2013-2015. The net result of the reduction in overall renewable fuel volume lowered the corn starch ethanol volume from 14.4 billion down to 13.01 billion gallons.

The rationale for the cellulosic biofuel volume reductions were based on projected production numbers, but the reduction in the overall renewable fuel volume was justified because of an “inadequate domestic supply” of those fuels. What this referred to was actually not the production numbers in gallons of those fuels, but the judgment that the infrastructure (storage, dispensing) and vehicles were not equipped to handle higher biofuel level than E10.

Thousands of comments were sent to EPA objecting to the proposed volumes, with the main concern being that without expanding the RVOs there is no incentive for growth in the advanced biofuel industry, the fueling infrastructure, or vehicles capable of performing on higher blends of biofuel.

On November 21, 2014, the U.S. EPA announced that it would continue to delay the release of final volumes for 2014 until 2015.

It is important to remember also that the Renewable Fuel Standard was implemented, in part, to reduce the carbon intensity of emissions from vehicle fuels by using renewable biofuels instead of foreign or domestic fossil fuels. A recent study by Argonne National Labs give credence to this claim for ethanol made from feedstocks of corn, sugarcane, corn stover, switchgrass, and miscanthus, and stated that these fuels will reduce greenhouse gas emissions anywhere in the range of 19% to 115%.^{14,15}

Recommendations

The state's petroleum replacement goal to expand renewable fuel options to E15 and higher blends of ethanol, as well as biofuel in general, lends itself to support for blender pump funding. It also provides rationale for ramping up vehicles with flex fuel capacity, no matter what the type or model of vehicle. This would in turn allow for consumer choice and present an increased market for homegrown, renewable biofuel. Implementation of the following recommendations would ensure that Minnesota remains at the forefront of state-level policy on renewable fuels infrastructure and FFVs:

- Expand support of flex pump and infrastructure grant programs that will allow E15 and higher blends of ethanol/biofuel to reach more consumers.

¹³ Letter from Mitch Bainwol, President and CEO, Alliance of Automobile Manufacturers, Washington, D.C., to Secretary Lisa Jackson, U.S. EPA, October 11, 2011.

¹⁴ Michael Wang, Jeongwoo Han, Jennifer B. Dunn, Hao Cai and Amgad Elgowainy. 2012, Well to wheels energy use and greenhouse gas emissions of ethanol from corn, sugarcane and cellulosic biomass for US use, *Environmental Research Letters*, Vol 7 (2012) 045905.

¹⁵ Emissions from corn ethanol were estimated to be reduced from between 19% to 48%.

- Establish incentives for increasing the production and use of a wide range of FFVs (for example, subcompacts, compacts, midsize and full sized vehicles), and vehicles which in the future will be able to take advantage of higher octane biofuel blends in Minnesota.
- Work for E15 to gain equal treatment to E10 in regards to RVP, such that E15 could be sold to 2001 and newer vehicles through the entire year.
- Encourage vehicle manufacturers to adopt the B20 standard for light duty, as well as heavy duty and industrial diesel engines.
- Continue to support the national Renewable Fuel Standard to its fullest in order to ensure the expansion of the conventional and advanced biofuels industries and all the infrastructure/vehicle needs that are required to support it. This will also strengthen the price incentive available through RIN trading that biofuel blends offer.

Expanding Renewable Fuel Options for Minnesotans

(2) expanding the renewable-fuel options available to Minnesota consumers by obtaining federal approval for the use additional blends that contain a greater percentage of biofuel;

The Minnesota Pollution Control Agency's Underground Storage Tank Enforcement

Based on the EPA's Notice of Final Guidance published July 5, 2011¹⁶, the Minnesota Pollution Control Agency began a more targeted enforcement of underground storage tank (UST) compatibility beginning in 2012. The guidance is based on 40 CFR Part 280, which in short says that the storage equipment for liquid fuels underground needs to be compatible with the fuel being stored. The primary concern of the MPCA was any ethanol blend storage above 10% and biodiesel over 20%.

After numerous stakeholder meetings with the MPCA, a third option¹⁷ was adopted whereby a tank owner could continue to store and dispense E85 and other blends of ethanol above 10% using certain unapproved infrastructure under certain conditions. That list of conditions can be found at the [MPCA website](#). Those conditions applied only to sites that were storing and dispensing greater than 10% ethanol blends on July 1, 2013. Any site that was not selling the incompatible fuel on that date must be in full compliance with compatibility requirements.

As a result of the requirements from the EPA's final guidance, many E85/higher ethanol blend sites found it necessary to cease offering product due to the cost of upgrading equipment to meet compatibility, even using the Option 3. You will notice a sharp decline in the number of E85 sites operating later in this section, beginning December, 2013. The aforementioned is the reason for this decline. In recent months the station count, which reached as low as 260 stations selling higher blends of ethanol, did begin to make a slight upturn.

Because biodiesel blends are not generally sold at greater volume mixtures than 20%¹⁸, the tanks issue does not apply to diesel at retail stations.

¹⁶ Federal Register, Volume 76, Number 128. Tuesday, July 5, 2011, Notices. Pages 39095-39101.

¹⁷ The first option is equipment approved by a national testing laboratory, such as Underwriter's Laboratory (UL); the second is manufacturer approval to store and dispense the fuel in the specific equipment.

¹⁸ ASTM D7467, Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20) covers up to 20% biodiesel, and is in practice the high blend volume used for biodiesel blends sold to the public.

Update: E15/E20

Section 211(f)(4) of the Clean Air Act requires that fuels that are not deemed “substantially similar” to gasoline acquire a waiver before sale can be made to the general public. It is the responsibility of the ethanol industry to apply for a waiver from provisions of the Clean Air Act. In March 2009, the ethanol industry group Growth Energy applied to the U.S. Environmental Protection Agency (EPA) for a national waiver from Section 211(f)(4) of the Clean Air Act to allow for up to 15 percent ethanol blends in gasoline (E15) and deem them safe for general use. Notably, due to Minnesota’s Ethanol Combustion Efficiency Grants authorized during the 2005 legislative session, money went toward E20 research. These studies helped leverage over \$40 million in research funded by the U.S. Department of Energy (DOE), the EPA, and others to determine the impact of E20 on domestic gasoline engines. This work was referenced in Growth Energy’s E15 waiver application.

In December 2009, the EPA announced that it would not approve or deny the waiver request until more testing data was available from DOE and others. EPA again delayed its decision in June 2010. In October 2010, EPA approved the use of blends containing up to 15 percent ethanol in 2007 model year and newer vehicles. The decision to approve E15 in 2001 to 2006 cars and light duty trucks was made January 21, 2011. This “bifurcated” approval requires retailers opting to sell E15 to continue providing E10, with specially labeled pumps indicating that E15 is only allowed in vehicles of certain model years. EPA’s decision document on E15 cited a lack of data on vehicles manufactured before 2001 as well as other applications (e.g., off-road products, heavy-duty engines and vehicles, and motorcycles), and thus denied the waiver request for these market segments.

Minnesota’s biofuel mandate states that gasoline must contain the maximum percentage of biofuel allowed at the federal level. However, the 2010 Minnesota Legislature added language specifying that the state will only match the federal ethanol blend rate if the EPA has approved it for all vehicles—Minnesota is not required to implement E15 or other higher blends approved at the federal level unless the approval covers “all gasoline-powered motor vehicles, irrespective of model year.” The legislation also provides the Minnesota Department of Commerce with authority to delay implementation until the state is adequately prepared for the change.

Regardless of potential changes at the federal level, Minnesota continues to pursue its goals for higher volume use of ethanol and potentially other biofuel blends, including but not limited to E15 today, and higher blends of ethanol into the future. During the legislative session of 2013, changes recommended by a special Biofuels Advisory Task Force were incorporated in Minn. Stat. §239.791 and 239.7911. Changes to 239.7911 included the new petroleum replacement goals. Changes also included repeal of specific E20 mandate language, while leaving language for higher biofuel blends that obtain a waiver that would include all gasoline-powered motor vehicles.

Update: E85 and Blender Pumps

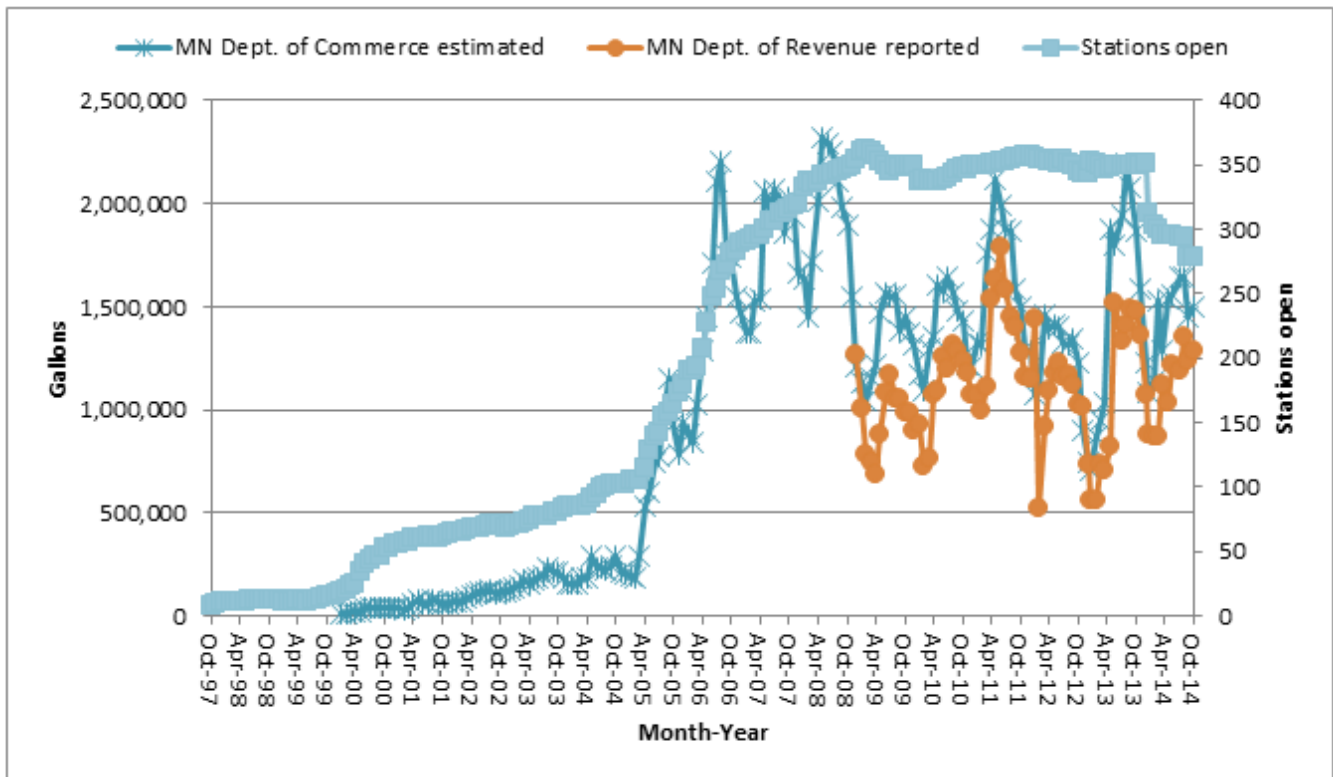
In 2012, estimated sales at Minnesota’s approximately 343 retail E85 outlets (12 percent of Minnesota service stations) totaled nearly 14.7 million gallons plus an additional 1.8 million gallons of E15 to E50 blends. For 2013 estimated sales of E85 were at 18 million gallons with an additional 1.8 million gallons of mid-blends. Through October 2014, the estimate for E85 gallons is 14.4 million with an additional 1.6 million gallons in mid-blends.¹⁹ These figures, combined with the ethanol contained in state E10 sales, are equivalent to approximately 10.5 percent of the state’s gasoline.²⁰ To reach a level

¹⁹ Minnesota Department of Commerce, 2012, 2013, and 2014 Minnesota E85 and Mid-Blends Station Report.

²⁰ This assumes all gasoline sold is blended with 10% ethanol. Currently non-oxygenated premium gasoline can be sold without ethanol for designated applications.

of 14 percent ethanol blended into gasoline by December 31, 2015, Minnesota would need to sell at least 430 million gallons of E85 annually.²¹ Figure 1 below depicts E85 stations and sales in Minnesota from 1997 to October, 2014.

Figure 1. Minnesota Monthly E85 Stations and Sales, 1997-2014



Source: Minnesota Department of Commerce

Approximately 30 percent of Minnesota’s E85 stations are equipped with blender pumps. In addition, Minnesotans own and operate about 377,000 flex-fuel vehicles, about 7.7% of Minnesota light duty vehicles, capable of running on intermediate and higher ethanol blends including E20, E30 and E85. ALAMN currently provides flyers to flex-fuel vehicle owners on events, station locations and other important information.

In addition to state-level efforts, several federal efforts have been made or are underway that could impact intermediate blend issues in Minnesota:

- The American Society for Testing and Materials (ASTM) expanded specifications for intermediate ethanol blends in anticipation of increased blender pump use.
- New use of E15 may expand the market for higher ethanol blends in 2001 and newer cars and light duty trucks, thereby also increasing the installation of blender pumps that dispense E85 and intermediate blends for use in flex fuel vehicles only.

²¹ Depending on the exact make-up of E85 (which by law can vary from a blend of 51-83 percent ethanol, and sales of intermediate ethanol blends such as E20-50, this number could vary slightly. 70% is used for an average here. The final blend number assumes that E85 has displaced E10 use.

Update: Advanced Biofuel Research and Implementation

Legislation in the spring of 2012 assigned a task force to study the next generation of biofuels, and to make policy recommendations regarding Minnesota's biofuel mandates.²² The NextGen Energy Board approved the Biofuels Advisory Task Force's recommendations, which were subsequently incorporated into Minn. Stat. 239.791 and 23.7911 in 2013. Provisions of the statutes allow sales of biofuels other than corn starch-based ethanol up to gradually increasing target volumes in upcoming years, from 2013 through 2015. This implementation schedule also gradually increases through 2025 the amount of non-ethanol biofuel allowed to be blended with gasoline in the total gasoline replacement percentage volume.

Currently there are Minnesota companies working on isobutanol, a 4-carbon alcohol, and drop-in hydrocarbon-identical fuels, and n-butanol, another isomer of butanol:

- GEVO became the first commercial renewable isobutanol company in the United States in June of 2012 when they started producing isobutanol in their converted ethanol plant in Luverne, Minnesota.
- Two other Minnesota ethanol plants have signed letters of intent with Butamax Advanced Biofuels, LLC. Butamax, the combined effort of BP and Dupont, will license technology that also would make for an add-on to an ethanol plant that will convert it to an isobutanol plant, and is considering its first commercial scale project for Lamberton at the Highwater Ethanol facility for 2015.
- Green Biologics is in the process of purchasing the ethanol plant in Little Falls and converting the plant to n-butanol production. Green Biologics, doing business as Central Minnesota Renewable, was awarded a NextGen Energy grant this past year to help with engineering costs associated with the retrofit of the plant.

Other Minnesota companies are working on "drop-in" replacement fuels made from biomass, and include:

- [SynGas Technology, LLC](#) (SGT) has developed a laboratory-scale, integrated torrefaction and high pressure gasification system, the data from which shows it addressing economic barriers to using diverse biomass feedstocks to produce cost-competitive full specification fuels meeting ASTM standards for gasoline, diesel, and jet fuels. Syngas is currently partnering with the University of Minnesota's Natural Resources Research Institute on a NextGen Energy grant project that is evaluating pretreatment methods for woody biomass.
- [JetE](#) has designed a 30 MGY plant that can produce full ASTM specification D7566 aviation turbine fuel. The plant, which would utilize fats and oils as feedstock, can be integrated into existing Ag processing plants or be located near points of fuel demand. JetE partnered with Al-Corn Clean Fuel ethanol plant in Claremont, Minnesota, on a NextGen Energy grant project that would use corn oil extracted from distiller grains as feedstock for JetE's renewable drop-in fuel.

Update: Renewable Natural Gas

Kwik Trip, Inc., of La Crosse, Wisconsin, has installed 30 compressed natural gas fueling stations, with six of those in Minnesota. The company has plans to add two new stations before the end of 2014 with

²² Minnesota Session Laws 2012, Chapter 244, Section 81: Next Generation Biofuel blends.

one of those located in Austin, Minnesota. In 2015 it has plans to add another 5-10 CNG locations, which include 2 potential Minnesota sites.

The company currently has 104 natural gas vehicles in their fleet ranging from light duty (pickups, vans) to semi-trucks used for delivery. It has plans to continue to convert its fleet to run solely on natural gas over the next several years, with an additional 25 CNG trucks on order for 2015.

All fueling stations are open to the general public and are used for light duty passenger and service vehicles, refuse haulers and local and national Class 8 fleet vehicles. Due to low natural gas prices in recent years, compressed natural gas presents an opportunity as a transportation fuel, and is currently selling for less than \$2/diesel gallon equivalent. In addition to fleet trucks, a few passenger cars, such as the Honda Civic, have a natural gas model.

Compressed natural gas is not a renewable fuel, but the increase in infrastructure to dispense it presents an opportunity for renewable natural gas to be sold as transportation fuel to natural gas distribution companies. Such fuel is approved by the EPA under the Renewable Fuel Standard, and as such can now generate cellulosic RINs that can be sold to obligated parties to satisfy renewable fuel blending requirements.

Recommendations

Minnesota should increase E85 and blender pump support and marketing, and encourage the use of in-state advanced biofuel production through the following actions:

- Support efforts by all major auto manufacturers to build engines capable of utilizing higher biofuel blends (E15; E20; E25; E30). Supporting specific efforts for vehicles using fuels with high octane ratings to take advantage of engine efficiencies could be a part of this effort.
- Work with Minnesota stakeholders to build support for flex fuel capacity in all internal combustion engine vehicles and engage with automotive manufacturers to drive the result, allowing fuel choice with every vehicle sold.
- Provide biofuel producers incentives for the production and consumption of advanced biofuel, in the state.
- Continue to support the Renewable Fuel Standard in moving forward with progressively larger volume requirements for biodiesel and biomass-based diesel, cellulosic and other RFS2-defined advanced biofuel.
- Encourage legislation that would support efforts to achieve the biofuels goals set in Minn. Stat. 239.7911.
- Support MDA educational efforts to discuss the pros and cons biofuels offer to the state.

Ensuring an Adequate Fuel Supply for Certain Applications

(3) developing recommendations to ensure that motor vehicles and small engine equipment have access to an adequate supply of fuel;

Update: State E10 Exemptions

Maintaining a fuel supply for all vehicles and machinery is a consideration as new fuels and blends move forward. Minnesota law allows for the use of non-oxygenated gasoline (E0) as premium-grade

gasoline for certain applications such as vintage automobiles and small engines.²³ However, only 440 of the state's 3,100 retail gas stations and specialized fuel outlets offer E0, indicating that demand is minimal. The majority of consumers utilize E10.

Issues arise with higher blends of ethanol (E15) and biodiesel (B10, B20) for other non-road applications, especially as they pertain to vehicle and equipment warranties. These issues are considered as implementation of state policies moves forward. The state continues to rely on the work of ASTM, where all fuels are tested for various applications, when considering the fuel's compatibility to perform in certain applications.

Recommendations

- To ensure continued access to various fuels across Minnesota, the state should continue to offer alternative fueling options such as E0 for specific applications. Other fuel options for aging vehicles or small engine applications should be considered as new fuels are brought to market, such as the offering of E10 should higher blends like E15 be adopted as the regular gasoline blend in the state.
- Blends of butanol with gasoline have been reported to have better compatibility with some applications, such as marine. As such blends become available, it will be important to promote these as alternatives to non-biofuel blends.
- To ensure consumers have immediate access to an alternative fuel choice with a smaller carbon footprint compared to gasoline, prepare state agencies and fuel retailers for the use of E15.

Increasing Renewable Fuel Use in Large Fleets

(4) working with the owners and operators of large corporate automotive fleets in the state to increase their use of renewable fuels;

Update: State Fleet Reporting and Other Fleet Use

Minnesota's Fleet Committee, established by Executive Order 04-10, sets ambitious goals for reducing state government consumption of petroleum fuels for transportation purposes, partially through the use of E85 in the state's fleet of approximately 4,200 flex-fuel vehicles. The state's fleet committee began tracking fuel use in January of 2005; fuel reports are distributed to the MDA on a quarterly basis.

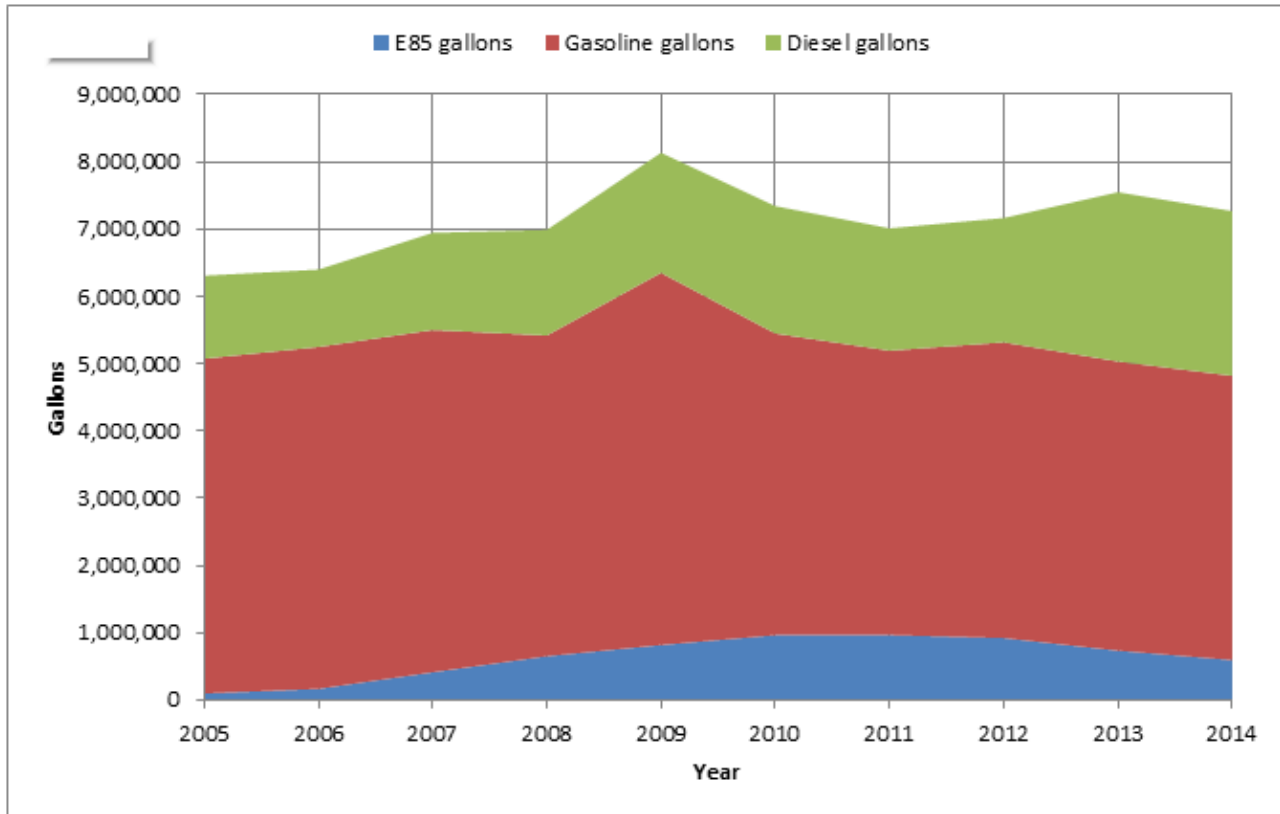
Fleet statutes were updated in the last legislative session. Stronger provisions were added for electric vehicles, plug-in electric hybrid vehicles, neighborhood electric vehicles, and natural gas vehicles such that if the total life-cycle cost of ownership is less than or comparable to that of gasoline-powered vehicles, they too can be purchased by the central motor pool or for use by an agency.²⁴ This allows more expanded purchase of these types of vehicles, none of which are currently offered with flexible fuel option for the use of E85.

State agencies continued to increase their use of E85 through 2011, but since that year use has declined. Each progressive year since has shown less use of E85, a steadily increasing use of diesel until this year, and a decline in gasoline use since 2012 (see Figure 2).

²³ MS §239.791, subd. 10-16.

²⁴ MS § 16C.135, Subd. 3 and 16C.138, Subd. 2.

Figure 2. Minnesota state fleet use of E85, gasoline (E10) and diesel since 2005.



Source: Minnesota Department of Administration.

In addition to state government, other fleets in Minnesota have efforts in progress to reduce petroleum consumption. The University of Minnesota, U.S. General Services Administration, U.S. Postal Service, the city of Minneapolis, and the city of Brooklyn Park all continue to operate fleets that run on E85.

Recommendations

- The state should work through biofuel stakeholder groups to promote the use of renewable fuel to fleet managers statewide, and provide credible and verifiable information on the benefits of renewable fuel to air quality, price (price advantages on an energy content basis with and without trading of RINs), and the state's economy.

Maintaining Affordable Retail Prices for Liquid Fuels

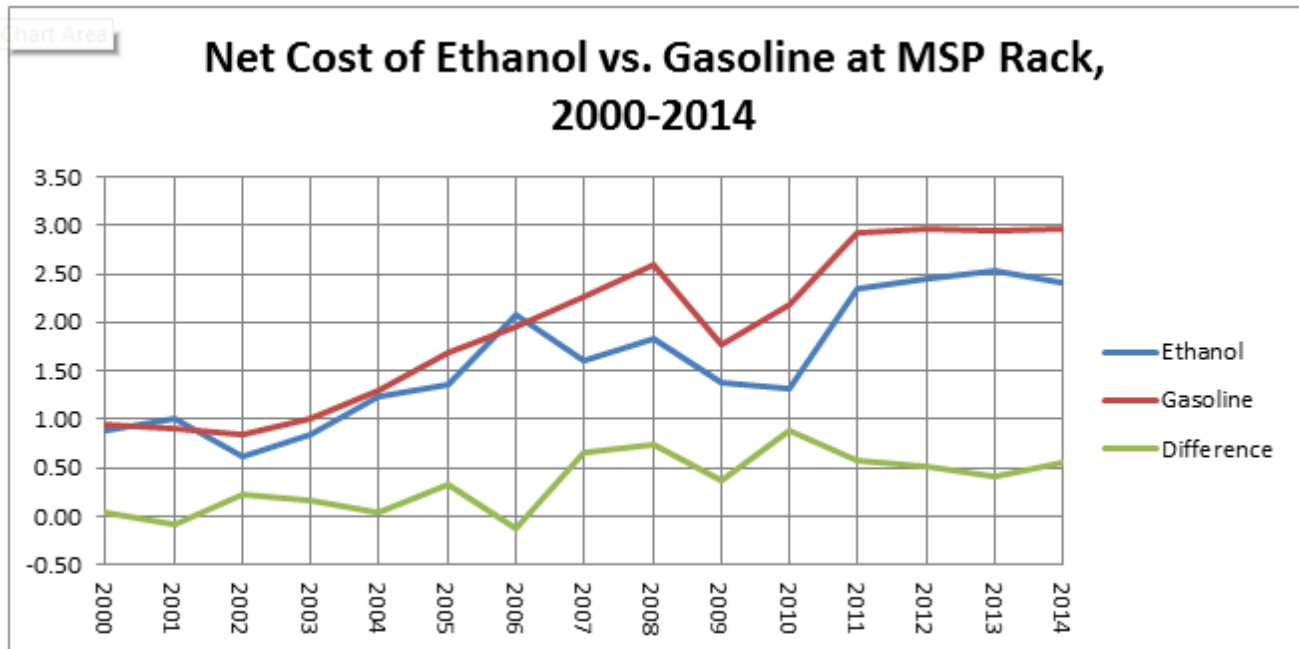
Update: Ethanol and Biodiesel Pricing Trends at the Fuel Terminals

The average net cost of a gallon of pure ethanol (E100) to the fuel terminal, or rack blender²⁵ for 2012, which was the first year without a federal tax credit, averaged 53 cents per gallon less than a gallon of 87 octane (regular unleaded) gasoline. In 2011, the average price per gallon of ethanol to the blender was \$2.80 as compared to \$2.93 per gallon of wholesale regular unleaded gasoline—a 13 cent difference. During 2013 the total difference to the blender was 40 cents. So far for 2014 the difference

²⁵ A blender is an individual or business that blends a petroleum product (other than denaturing ethanol) with fuel grade ethanol or biodiesel. For example, a blender could be a refiner, a position holder at a pipeline terminal, a business that operates a chain of gas stations, or a jobber (wholesaler) that makes bulk deliveries and blends ethanol or biodiesel with gasoline or diesel for use at the consumer level. Most ethanol and biodiesel blends are made at the refinery or terminal level.

has been 56 cents. There has not been a blender's tax credit for ethanol since December 31, 2011. Figure 3 details these trends from 2000 to 2014.

Figure 3. Minnesota Ethanol²⁶ and Gasoline²⁷ Pricing Trends, 2000-2014



Source: Minnesota Department of Agriculture analyses of Axxis pricing data.

The lower cost of ethanol per gallon, along with the significant boost in the octane value of an ethanol blend, is generally expected to be passed onto the consumer and reflected in lower costs at the pump. Thus, further government policy subsidy or incentive has not been necessary for ensuring the price of ethanol is not negatively impacting the price of gasoline to the consumer.

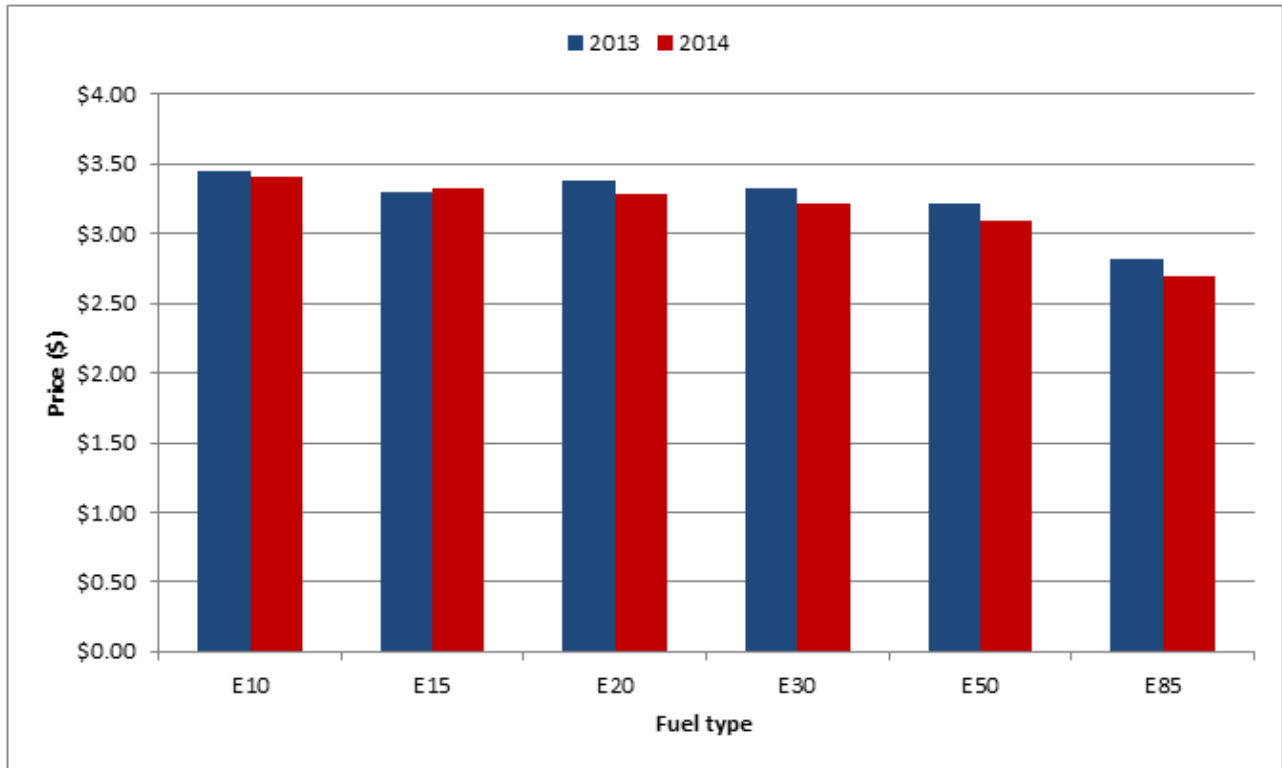
The price for intermediate ethanol blends has also been below gasoline. In 2013-14, the price to the consumer for a gallon of fuel was lowered with higher blends of ethanol, as shown in Figure 4.²⁸

²⁶ Net ethanol cost to the blender, after tax credit.

²⁷ 87 octane gasoline (clear, with no ethanol) price at the rack. A rack price reflects prices that are posted at the rack, but do not include taxes, customer discounts or transportation costs—thus, these prices can be used to indicate general price trends.

²⁸ The price for E15 and E40 may be skewed by the fact that very few stations have been offering these blends.

Figure 4. Average 2013-14 Prices for Intermediate Ethanol Blends, E85 and E10.



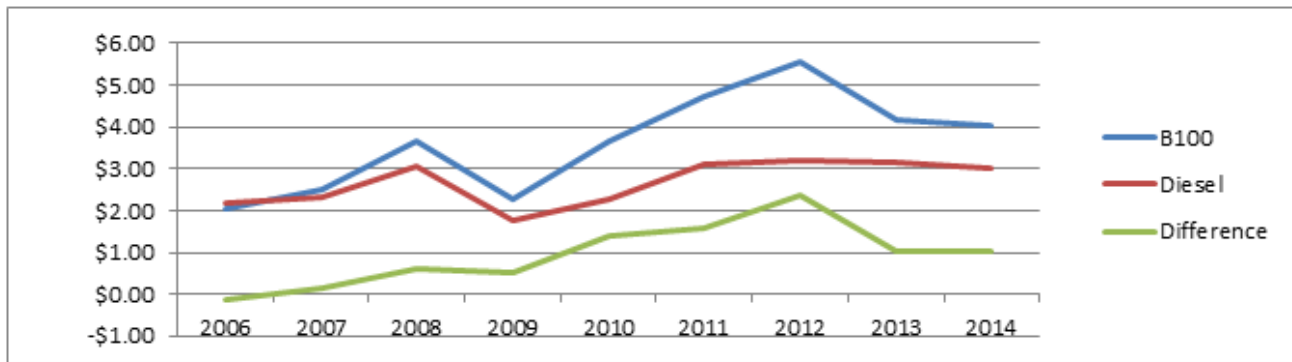
Source: Minnesota Department of Agriculture analyses of Minnesota Department of Commerce Data

In 2013, the price of RINs for ethanol began to sell for a higher value due to more demand for ethanol through the RFS and the number of obligated parties that desired to purchase RINs rather than blend ethanol. The approaching blend wall has been attributed with that price increase. The blend wall is the term for the point when all of the regular gasoline in the country is blended with 10% ethanol. Because most all of the gasoline in the country is now sold as E10, RINs for ethanol need to be obtained from the blending of higher blends of ethanol, such as E85. This year ethanol RIN price has stabilized considerably, possibly because the RVO's for conventional biofuel were proposed to be reduced per the EPA guidance document from November, 2013.

The price of biodiesel fuel has experienced volatility along with diesel fuel prices. Over the past several years, the net cost of a gallon of pure biodiesel (B100) to the blender—after the federal tax credit, which was set at \$1 per gallon in 2013 but was not extended to 2014 until late December 2014—has at times been lower and higher than the commensurate wholesale cost of diesel fuel.²⁹ The rack prices are graphically shown in Figure 5. Rack prices for ethanol and biodiesel, however, are only part of the overall pricing story, as will be discussed later.

²⁹ The net price is the price of biodiesel at the rack (wholesale) minus the \$1.00 federal tax credit to the blender, when the blender credit was in effect.

Figure 5. Diesel³⁰ and Biodiesel³¹ Price Trends at MSP Terminals, 2006-2014³²



Source: Minnesota Department of Agriculture analyses of Axxis pricing data.

Tax Credits for Biofuels

The Volumetric Ethanol Excise Tax Credit expired December 31, 2011, and has not been reinstated. Request for its reinstatement is not expected to be made by the ethanol industry.

Historically, biodiesel blenders have received a tax credit of \$1.00 per gallon of biodiesel blended with diesel since 2005. This credit expired at the end of 2013, which was the third such time it has expired. Since that time, industry and other stakeholder groups have continued to urge the U.S. Congress to retroactively reinstate the tax credit for 2014 and extend it into the future. Industry arguments are that the 1.8 billion gallons of production at present is still only a fraction of the 60 billion gallon U.S. diesel pool with a strong capacity of growth, and that the U.S. biodiesel industry supports some 62,200 jobs along with \$2.6 billion in wages and \$17 billion in total economic activity.³³

Impact of Market Value for Renewable Identification Numbers

The federal Renewable Fuel Standard (RFS2) program allocates Renewable Identification Numbers (RINs) to each gallon of ethanol, biodiesel, advanced and cellulosic biofuel produced, which have a value in the market when the fuel is blended and RINs can be separated from the gallons of fuel. Each qualified gallon of ethanol earns one RIN and a gallon of qualified biodiesel represents one and a half RINs. Besides being retired to show compliance with RFS blending requirements, RINs can be used by the independent, non-obligated party blender to offset the cost of the biofuel when sold in the RIN market, which are then eventually sold to obligated parties that are in need of showing compliance with RFS2. Biodiesel RINs can also be used to satisfy advanced biofuel requirements for RFS2 obligated parties, or sold as advanced biofuel RINs into the RIN market.

³⁰ Price of diesel at the rack (wholesale).

³¹ Net B100 cost to the blender, after \$1.00 federal tax credit is applied. This credit was applied for 2006-2009; however, the tax credit expired as of January 1, 2010 and was thus not included in 2010 data analyses .

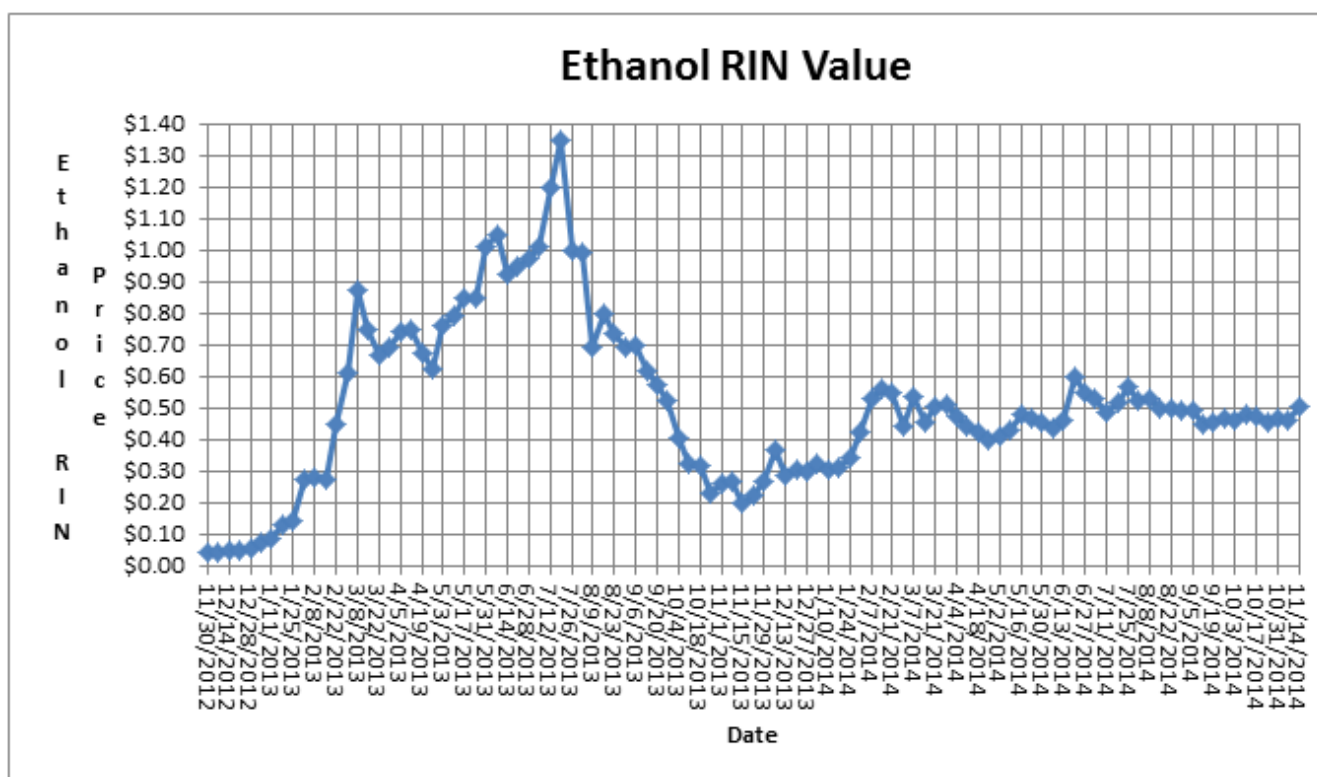
³² From March 24, 2008 to May 2, 2008, data on the price of biodiesel was not available through the Axxis pricing service. After a review of data in May, Axxis determined that the increase in price was not an error, but actually reflected market conditions. Axxis reestablished B100 prices effective May 2, 2008. To avoid the appearance of understating the price of biodiesel during that period, the average price of the last day of available data (March 28) and the first day of data (May 2) was inserted for the month of April.

³³ National Biodiesel Board, [Biodiesel Tax Incentive – Talking Points](#).

Through October, 2012, the value assigned to ethanol RINs had ranged from 1 to 6 cents per gallon for 2012; therefore each qualifying gallon of ethanol, given a 6 cent RIN value at the time of blending, could be traded on the RIN market for a value of 6 cents. Those values dramatically increased in 2013 with values of an ethanol RIN reaching well over \$1, but settling into an average of around 60 cents during 2014. Biodiesel RINs ranged from \$0.25 to \$1.36 during 2013 and, earning 1.5 RINs per gallon, were eligible to trade from \$0.38 to \$2.04 per gallon. The average biodiesel RIN price for all weeks in 2013 was approximately \$0.72 representing a value of \$1.08 per gallon. In 2014 the biodiesel RIN market has been very steady, with RINs ranging from \$0.40 to \$0.67 (valued from \$0.60 to \$1.01 per gallon). RINs can be carried forward into the next year.

Ethanol RINs, now averaging around \$0.60, are potentially a way for the retailer to offer cheaper E15/E85 and other higher blends of ethanol. Figure 6 below charts week-to-week RIN prices for ethanol over the past two years.

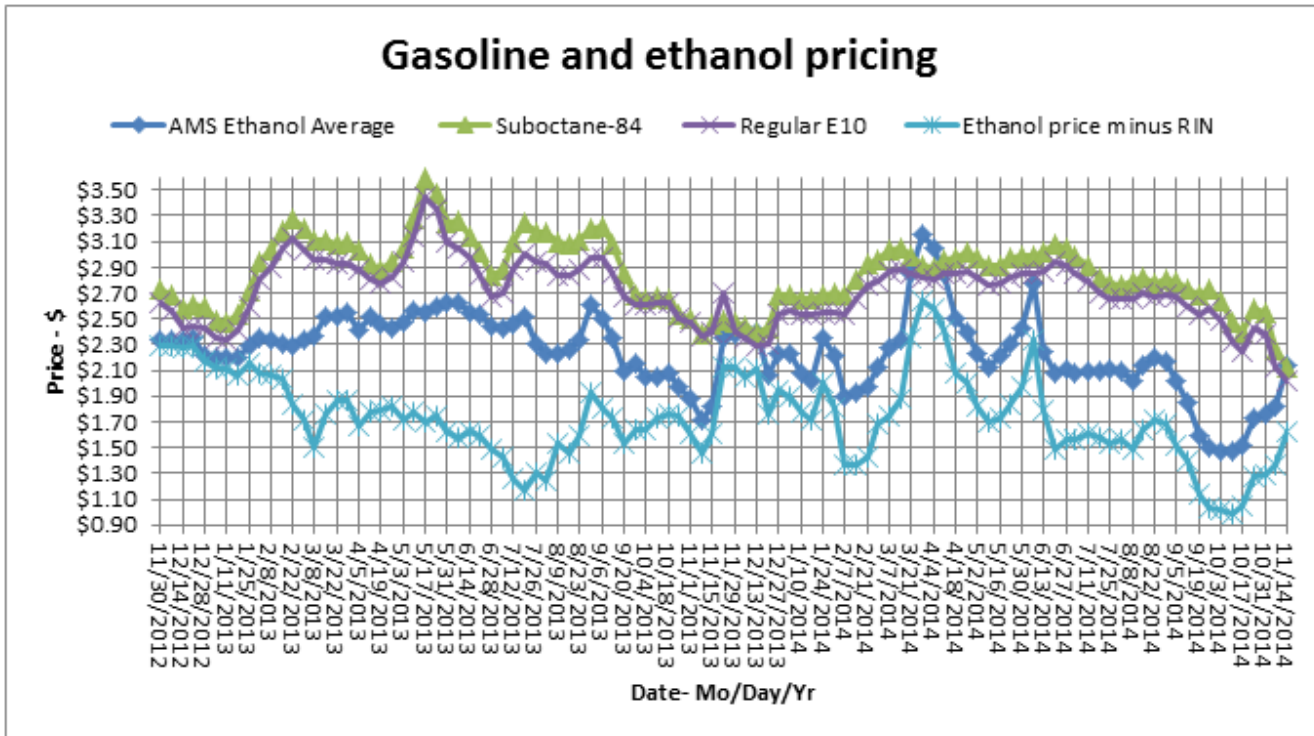
Figure 6. Weekly ethanol RIN price, 2013-14.



[Progressive Fuels Limited](#), Friday's daily report price average.

Figure 7 shows the effect on pricing of subgrade 84 octane blendstock and E10 from the Minneapolis-St. Paul rack, ethanol from the plant (average Minnesota price per Agricultural Marketing Service), and ethanol from the plant with the RIN subtracted. To make regular 87-octane gasoline, E10, subgrade 84 octane blendstock is mixed with 10% ethanol. Figure 7 used calculation of E10 prices when considering the full RIN reducing the overall price of E10.

Figure 7. Gasoline and ethanol pricing, 2013-14



Over the past two years the average price of ethanol from the plants has been consistently lower than the price of regular gasoline blendstock, subgrade 84 octane. The price of regular 87-octane E10 has reflected this by pricing lower than subgrade 84. When ethanol, along with the advantage a blender can get by selling a separated RIN, is used in regular 87 octane, E15, or any higher blend of ethanol, that fuel should be priced lower than the base blendstock. Prices over the course of the last two years have been low enough for E85 to be sold at an energy advantage (more Btu/dollar spend on fuel), with differences common of \$0.90-\$1.00 at certain stations statewide for E85.

It appears that the market for B100 adjusts with the loss of the federal tax credit. For every week of 2014 except the first week (just after the \$1 blender credit expired) tracked by the MDA this past year, the RIN value for biodiesel has produced a B100 with a lower value than #2 diesel at the rack in Minneapolis St. Paul terminals (see Figure 8).

Figure 8. #2 Diesel³⁴ and Biodiesel³⁵ Price Trends, showing effect of Biodiesel RIN³⁶ Values -2014³⁷

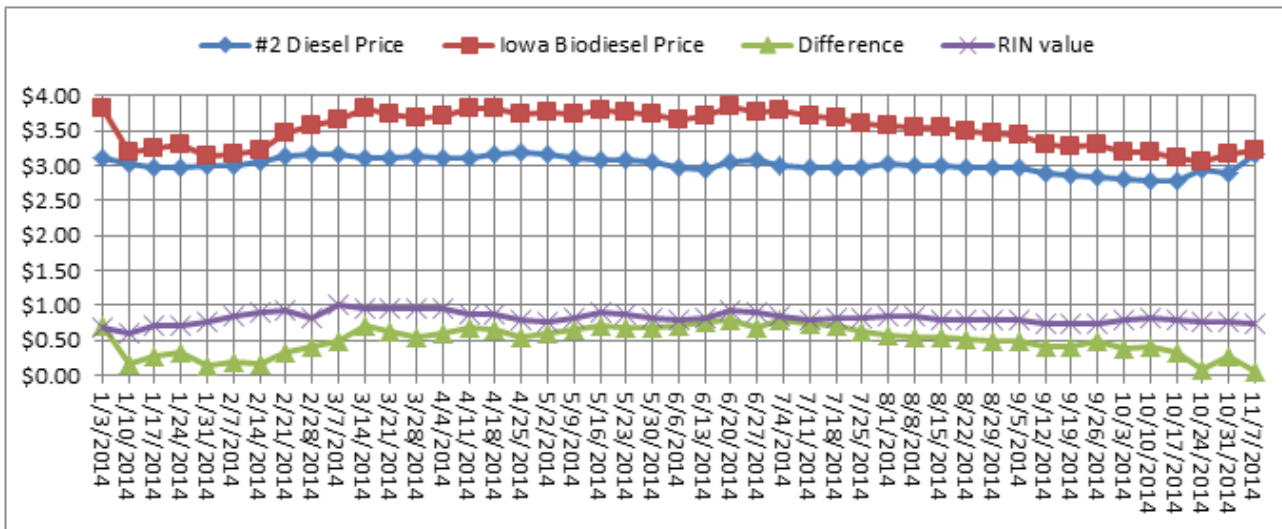
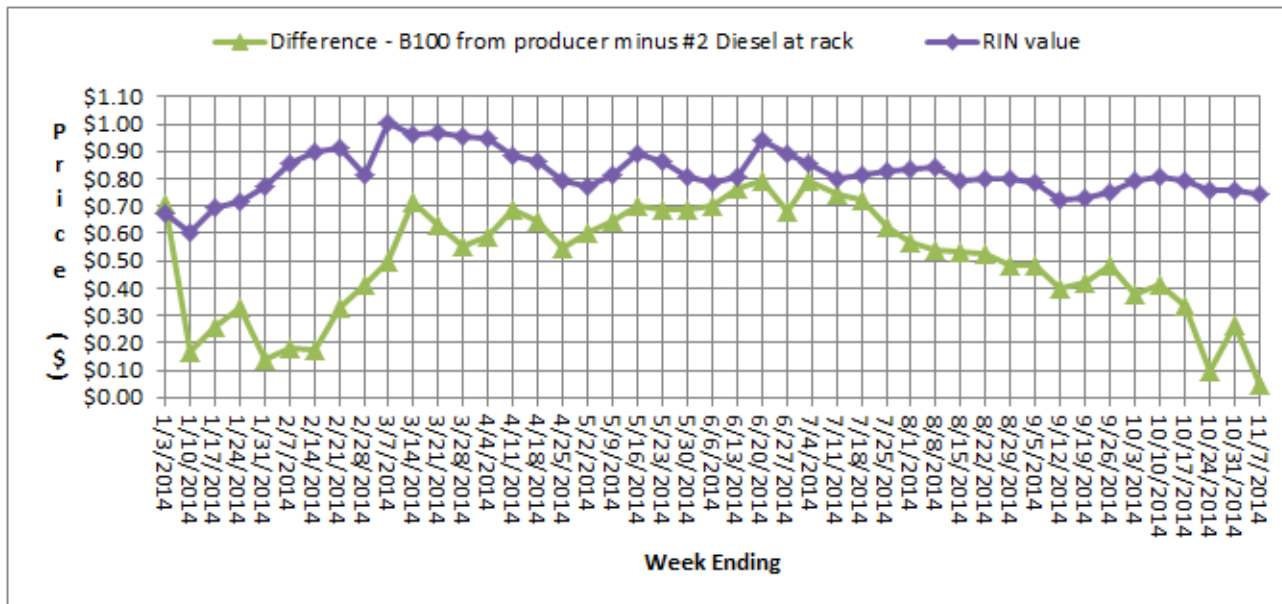


Figure 9 shows the detailed breakout of the difference and RIN price. When the RIN value (1.5 X Biodiesel RIN price) is greater than the difference in #2 diesel and biodiesel, there is potential profit for the blender that is not an obligated party under RFS2.

Figure 9. Zoom in of Difference and RIN value of Figure 12.



³⁴ Price of diesel at the rack (wholesale).

³⁵ Biodiesel average price of Iowa plants (Minnesota unavailable) from weekly AMS report [National Weekly Ag Energy Round-up](#).

³⁶ RIN values obtained from [PFL Daily report](#).

³⁷ From March 24, 2008 to May 2, 2008, data on the price of biodiesel was not available through the Axxis pricing service. After a review of data in May, Axxis determined that the increase in price was not an error, but actually reflected market conditions. Axxis reestablished B100 prices effective May 2, 2008. To avoid the appearance of understating the price of biodiesel during that period, the average price of the last day of available data (March 28) and the first day of data (May 2) was inserted for the month of April.

This potential impact of RINs illustrates the fact that the net cost of ethanol or biodiesel to the blender (which could ultimately be passed to the consumer) is dependent on a number of variables including unknown customer discounts, term contract prices versus spot market differentials, the value of RINs, tax credits, profit margins, and marketing strategies. The ability to manage these variables can add to the profitability of blending; thus, the profitability of ethanol and biodiesel is not reflected by rack or retail prices alone.

Recommendations

To date, the market has developed in a way that minimized any additional fuel cost to blenders and often led to circumstances where blender costs were lower than if they had purchased conventional gasoline or diesel fuel alone. As long as blender costs are lower or not significantly higher, the cost to consumers should not be a great concern. To maintain affordable prices for renewable fuels in Minnesota, the state should:

- Continue to encourage third party blending of ethanol and biodiesel by independent blender so as to incent price competition for biofuel blends.
- Continue to monitor market conditions and respond with appropriate policy actions, including incentives that could help improve the economies of both rural and statewide Minnesota.

Facilitating the Production and Use of Advanced Biofuels in Minnesota

To date the only advanced biofuel production in Minnesota has been biodiesel, which can be used under RFS2 for biodiesel (D4 RINs) or advanced biofuel (D5) RINs.

Iowa and Kansas are the first states where the first commercial cellulosic ventures opened this past year. Cellulosic ethanol qualifies under RFS for both D3 (cellulosic ethanol RINs) and D5. The three major plant openings in this past year include:

- Quad County Corn Processors, Galva, Iowa. Quad County is a 35 million gallon corn ethanol facility that began making cellulosic ethanol from the corn kernel fiber. The facility's ACE project (Adding Cellulosic Ethanol) produces an additional 2 million gallons of ethanol per year.
- Poet Biorefining, Emmetsburg, Iowa. Poet/DSM's Project Liberty has been a long time in the making, but it did begin production this past summer in what is slated to be a 25 million gallon per year cellulosic facility. The plant received more than \$100 million in U.S. Department of Energy funding, along with an award from the Iowa Power Fund, which supplied grants to renewable energy projects from 2007-10. The cellulosic plant is collocated with Poet's 55 mgy corn ethanol plant at the same site. The feedstock used for cellulosic production is the corn cob, leaves, husks, and some stalks. Biomass needed for the cellulosic portion is 300,000 tons taken from 468 square miles or 4.26 tons per acre.
- Abengoa Bioenergy, Hugoton, Kansas. This project has been supported by a \$132.4 million in loan guarantee and a \$97 million grant from the U.S. DOE. Abengoa Bioenergy is a 25 million gallon per year cellulosic facility using primarily corn stover as feedstock (over 80 percent), with additional biomass coming from wheat straw, milo stubble and switchgrass. On-site cogeneration will produce 21 MW of electricity per year which is enough power to sell some back to the local cooperative. The Kansas facility is a stand-alone site that uses a combined 1,000 ton of biomass a day for both ethanol feedstock and electricity generation.

Arriving early in 2015 will be DuPont Cellulosic Ethanol, a 30 mgy plant located alongside Lincolnway Energy, a 50 mgy corn ethanol plant in Nevada, Iowa. DuPont is reported to be spending \$200 million

to build the plant, which will use corn stover as its feedstock. The project received \$9 million in funding from the Iowa Power Fund and \$500,000 from the Grow Iowa Values Fund, and has worked extensively with central Iowa corn farmers and Iowa State University to research the optimization of collection, transport, and storage of biomass.

In the 2014 legislative session, the Bioeconomy Coalition proposed a bill that would offer production incentives for production of renewable chemicals and advanced biofuels by Minnesota companies. Although this legislation did not move forward in the 2014 session, it could be reintroduced in 2015. This program would provide incentives for production of advanced biofuels made from either sugars or cellulose, with cellulose bringing a higher incentive.

Recommendations

Advanced biofuel production offers the promise for economic development statewide and the addition of value to Minnesota forestry and agricultural resources. It is recommended that the state:

- Consider the institute a state-funded payment for advanced biofuel production.
- Investigate the feasibility and overall gains for Minnesota in providing biofuel producers with tax credits for investing in technologies which allow them to produce advanced biofuels.
- Consider a retailer incentive for the sale of the advanced biofuel production that occurs within the state boundaries to guarantee a market for the sale of that in-state production.

Develop Procedures for Reporting the Type of Biofuel Being Used in the State

Currently, no biofuel other than corn ethanol and biodiesel is being produced in the state. Biodiesel and ethanol are easy fuels to separate as they are blended into different fuels, gasoline and diesel, respectively, and are used in different engines. But if and when advanced ethanol is produced, how will it be discerned from the identical molecule which is corn ethanol? How would chemically identical drop-in fuels be accounted for under the biofuel mandate for blending with gasoline? And what accounting procedure would allow biobutanol to be used to fulfill mandate requirements?

In the past legislative session Minnesota Department of Commerce's Division of Weights and Measures included a system in state statute that would allow biodiesel content of a diesel/biodiesel blend to be tracked throughout the supply chain.³⁸ Verification of this kind may be necessary to track conventional and advanced biofuel that is blended into the gasoline supply.

This issue has yet to be taken up by the Biofuels Task Force.

Recommendations

Discerning between different types of biofuel used for blending with gasoline will be important to the future implementation of the state's biofuel mandate. It is recommended that:

- The Biofuels Task Force meet to begin the discussion of the topic of biofuel type reporting with the Minnesota Department of Commerce's Division of Weights and Measures and other state stakeholders.

³⁸ Minn. Stat. 239.77, Subd. 4.

Appendix I – The Biofuels Task Force

The revision to Minn. Stat. 239.7911 during the legislative session in 2013 directed the formation of a biofuels task force:

Beginning November 1, 2005, and continuing through 2015, the commissioners, or their designees, shall convene a task force pursuant to section [15.014](#) that includes representatives from the renewable fuels industry, petroleum retailers, refiners, automakers, small engine manufacturers, and other interested groups. The task force shall assist the commissioners in carrying out the activities in paragraph (b) and eliminating barriers to the use of greater biofuel blends in this state. The task force must coordinate efforts with the NextGen Energy Board, the biodiesel task force, and the Renewable Energy Roundtable and develop annual recommendations for administrative and legislative action.

The positions for that task force were posted and filled in the summer of 2013. The first and only meeting of that task force held through today occurred on December 11, 2013. The agenda and notes from that meeting, as well as notice of future meetings, can be found on the [Biofuels Task Force website](#).

The membership of the Biofuels Task Force is:

Position	Name	Affiliation
Biofuels Industry #1 (Ethanol processor)	Erik Osmon	Bushmills Ethanol, Inc.
Biofuels Industry #2 (Butanol/ethanol/other processor)	Brian Kletscher	Highwater Ethanol, LLC
Petroleum Retailers	Lance Klett	MN Service Station Association
Auto manufacturers	John Kasab	Ricardo, Inc.
Small engine manufacturers	Ryan Hayes	Arctic Cat
Petroleum refiner	Dustin Haaland	CHS
Research Organization	Bruce Jones	MN State University Mankato
Grower's Organization	Tim Gerlach	MN Corn Growers Association
At-Large Member #1	Larry Johnson	At-Large member
At-Large Member #2	Ralph Groshen	At-Large member

The task force is currently scheduled to expire December 31, 2015. Should it be extended, the appointment process will again be initiated at that time.