

**Testimony of Anthony Fiore
New York City Mayor's Office of Sustainability**

**Before the
New York City Council Committee on Environmental Protection**

**Hearing on Introduction 642
Regarding the Use of Clean Heating Oil in New York City**

**And
Hearing on Introduction 880
Regarding the Use of B-5 Biodiesel Fuel in City-Owned, Operated or Contracted School Buses**

October 26, 2015

Good morning Chairman Constantinides and members of the Committee on Environmental Protection. I am Anthony Fiore, Director of Energy Regulatory Affairs from the Mayor's Office of Sustainability, and I am joined by my colleagues, Keith Kerman and Cathy Pasion. Mr. Kerman is the Deputy Commissioner and Chief Fleet Officer for the Department of Citywide Administrative Services. Mr. Kerman has led many of the City's efforts in pushing the boundaries with respect to the use of biofuels and evaluating the impacts of such. Ms. Pasion is the senior policy advisor on energy with the Mayor's Office of Sustainability. Ms. Pasion led a study published in June of this year that took a systemic approach to understanding the feasibility of increasing the use of five percent biofuel or B5 throughout the city and the potential for the implementation of higher blends. Thank you for inviting us to testify regarding the introduction of two bills, Introduction number 642 ("Intro 642"), which pertains to the use of increasingly higher blends of biofuel for building heat and Introduction number 880 ("Intro 880"), which pertains to the use of biodiesel in school buses.

Intro 642 would require all buildings within the City of New York that use fuel oil for heating have that fuel be both ultra-low sulfur diesel fuel ("ULSD") and at least B5 by October 1st, 2016. Thereafter, Intro 642 requires an increase in the percentage biodiesel, by 5 percentage points, in 5 year increments up to 20 percent in 2030.

Intro 880 would require diesel-powered school buses that are owned, operated, or contracted by the City to be powered by fuel that is both ultra-low sulfur diesel fuel and at least B5.

The Mayor's Office of Sustainability appreciates the attention the City Council is paying to biofuel. While the city's air-quality ranking among major U.S. cities improved from seventh place to fourth place¹, levels of air pollution continue to cause serious health problems contributing to hospital admissions and deaths, mainly from heart and lung problems. It is estimated that particulate matter of 2.5 microns or less contribute to more than 2,000 deaths and over 6,000 emergency visits and hospitalizations for cardiovascular and respiratory disease each year². All neighborhoods are affected by these health impacts, but they disproportionately occur in high poverty communities and among vulnerable populations.³ ⁴The two predominant sources of PM2.5 are emissions

¹ U.S. Environmental Protection Agency. Air Quality System: <http://www2.epa.gov/ags> (last accessed October 26, 2015).

² New York City Department of Health and Mental Hygiene. *New York City Trends in Air pollution and tis Health Consequences*. September 26,2013: http://www.nyc.gov/mwg-internal/de5fs23hu73ds/progress?id=tt2q_FjrLYZxPJyhsBR4IskOb3Zw73PkPwA-wYCdmM (last accessed October 26, 2015)

³ New York City Department of Health and Mental Hygiene. *Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone*. <http://www.nyc.gov/html/doh/downloads/pdf/eode/eode-air-quality-impact.pdf> (last accessed October 26,2015)

⁴ Kheirbek, I, Wheeler, K, Walters, S. et. al., PM2.5 and ozone health impacts and disparities in New York City: sensitivity to spatial and temporal resolution. *Air Qual Atmos Health*. 2013, Jun; 6(2): 473-486.

from buildings and traffic, accounting for more than 70 percent of PM2.5 emissions in the city.⁵

Biomass-based fuels are a general term used to describe mixtures of diesel fuels with a range of concentrations between two and 99.9 percent of biomass-based distillate, or biodiesel. Biofuels are rendered from recently living organic matter, such as vegetable oil, animal fat and waste oils, unlike petroleum-based fuels that have been trapped in geologic formations for millennia. The International Panel on Climate Change Guidelines for National Greenhouse Gas Inventories does not count their burning towards greenhouse gas emissions though it does require that CO₂ emissions from biomass combustion be reported separately for informational purposes only. In short, the combustion of biofuel sources avoids the release of carbon dioxide that had been otherwise permanently removed from the carbon cycle⁶ and thereby helps to decrease the city's carbon footprint.

We support initiatives that reduce air emissions from transportation and heating fuel, in support of multiple goals of *OneNYC*,⁷ namely reducing citywide greenhouse gas emissions by 80 percent below 2005 levels by 2050 and having the best air quality of any large U.S. city by 2030. Expanding the use of cleaner fueling alternatives in vehicles and buildings that operate within city boundaries is a crucial strategy to reduce emissions of greenhouse gases. Moreover, increasing biofuel usage can reduce air pollutants and so lead to improvements in our air quality. Biodiesel use in boilers leads

⁵ U. S. Environmental Protection Agency. 2011 National Emissions Inventory. <http://www3.epa.gov/ttnchie1/net/2011inventory.html> (last accessed October 26, 2015). (adjusted with local estimates of No. 2, No. 4, and No. 6 fuel oil combustion)

⁶ The carbon cycle is the biogeochemical cycle by which carbon is exchanged among the biosphere, pedosphere, geosphere, hydrosphere, and atmosphere of the Earth

⁷ City of New York (2015), *One New York: The Plan for a Strong and Just City*.

to a decrease in emissions of nitrogen oxides (NOx).⁸ NOx is an important contributor to smog, which forms particularly on hot days, which are increasing in number annually as the climate changes. A number of scientific studies have linked short-term NOx exposures with adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma.⁹ For example, NOx emissions from boilers less than 100 Million Btu/hr are approximately 20 lbs per 10,000 gallons for No. 2 oil and 55 lbs per 10,000 gallons for No. 6 oil.¹⁰ As the biodiesel blend level increases, NOx emissions decrease linearly. In other words, with every one percent increase in biodiesel blend level, there is a corresponding one percent decrease in NOx emissions. In the transportation context, the effect is not as clear cut, with studies that evaluated NOx emissions indicating more variability based on age, manufacturer and model of vehicle with some studies suggesting slight increases in NOx emissions, especially with respect to older engines.^{11,12,13} For example, a 2007 meta-analysis conducted by the National Renewable Energy Laboratory indicates that there is no net impact on vehicle NOx emissions.¹² But the effect is unambiguous with respect to boilers and newer vehicles.

Where we see a clear difference is with particulate matter emissions. Biodiesel blends of 20 percent (B20) have been shown to reduce emissions of particulate matter by 14–

⁸ NREL, "Biodiesel Handling and User Guide", Fourth Edition (Revised), January 2009, accessed June 2013, <http://www.nrel.gov/vehiclesandfuels/pdfs/43672.pdf>

⁹ <http://www3.epa.gov/airquality/nitrogenoxides/health.html>

¹⁰ EPA, "Compilation of Air Pollutant Emission Factors," Chapter 1.3: Fuel Oil Combustion, Fifth Edition, Volume I, pg. 5, accessed June 2013, <http://www.epa.gov/ttnchie1/ap42/>

¹¹ R.L. McCormick (2007), "The Impact of Biodiesel on Pollutant Emissions and Public Health," *Inhalation Toxicology: International Forum for Respiratory Research* 19(12).

¹² R.L. McCormick, A. Williams, J. Ireland, M. Brimhall, and R.R. Hayes (2006), "Effects of Biodiesel Blends on Vehicle Emissions: Fiscal Year 2006 Annual Operating Plan Milestone 10.4," NREL/MP-540-40554. Available online at: <http://www.nrel.gov/docs/fy07osti/40554.pdf>.

¹³ R.E. Morris and Y. Jia (2003), "Impact of Biodiesel Fuels on Air Quality and Human Health: Task 4 Report," NREL/SR-540-33797. Available online at: <http://www.afdc.energy.gov/pdfs/33797.pdf>.

15 percent, and have also reduced emissions of other gaseous pollutants including carbon monoxide and hydrocarbons relative to conventional diesel.^{11,12,5,14} Because fine particulates are more closely linked to human mortality than is NO_x, we would expect to see that a switch to biodiesel would result in a net improvement in air quality and public health.¹⁵ Adults with preexisting heart or lung disease are especially vulnerable to the effects of fine particle pollution, which compromises lung performance deep within the lungs.¹⁶

Particulate emissions are of particular concern for school buses because of the potential exposures to the City's schoolchildren. The U.S. Environmental Protection Agency reports that diesel exhaust from school buses has a negative impact on human health, especially for children who have a faster breathing rate than adults and whose lungs are not yet fully developed.¹⁷ Nearly 94% of diesel particulates have diameters less than 2.5 micrometers (um) with the average diameter of diesel particulates at 0.2 micrometers. Children may be especially susceptible to adverse respiratory effects following exposure to fine-diameter particulate matter emitted from diesel engines. Smaller particles are able to penetrate children's narrower airways reaching deeply within the lung, where they are more likely to be retained. Higher rates of respiration among children may lead to their higher exposure, when measured per unit of their body weight. There is no known safe exposure to diesel exhaust for children, especially those with asthma or other chronic respiratory disease. In addition, diesel exhaust is classified by many

¹⁴ U.S. EPA (2002), "A Comprehensive Analysis of Biodiesel Impacts on Exhaust Emissions," EPA420-P-02-001. Available online at: <http://www3.epa.gov/otaq/models/analysis/biodsl/p02001.pdf>.

¹⁵ R.E. Morris and Y. Jia (2003), "Impact of Biodiesel Fuels on Air Quality and Human Health: Task 5 Report," NREL/SR-540-33798. Available online at: <http://www.nrel.gov/docs/fy03osti/33798.pdf>. Accessed 10/19/2015.

¹⁶ <http://www3.epa.gov/pm/health.html>

¹⁷ <http://www2.epa.gov/cleandiesel/clean-school-bus>

governmental authorities, including the International Agency for Research on Cancer, the U.S. National Toxicology Program, and the U.S. Environmental Protection Agency as a probable human carcinogen. There is no single standard for acceptable cancer risk from diesel exhaust in the U.S.¹⁸

New York City has undertaken significant efforts to reduce greenhouse gas emissions through strategic initiatives. A significant biomass fuel initiative was achieved in October 2012, when all commercial and residential buildings in the City were required to use heating oil with at least two percent biodiesel by volume pursuant to Local Law No. 43 for the year 2010. In 2013, 31 million liters of biofuel were consumed in buildings in New York City buildings. This resulted in a greenhouse gas emission reduction of 84,000 metric tons- the equivalent of removing almost 17,700 passenger vehicles from the road.

In 2011, the Department of Environmental Protection issued regulations that require all buildings burning No.6 heating fuel oil to convert to a cleaner fuel by June 30, 2015. All buildings burning No.4 heating fuel oil must convert to a cleaner fuel including natural gas, ultra-low sulfur No.2 oil with 2 percent biodiesel, or steam upon boiler or burner retirement or by January 1, 2030, whichever is sooner. The NYC Clean Heat program was created to implement the phase out of heavy heating oil in buildings. Between 2012 and 2015, NYC Clean Heat resulted in nearly 6,000 heating oil conversions from No.6 or No.4 oil to a cleaner fuel. As a result, PM 2.5 emissions from buildings previously burning these heavy heating oils have been reduced by 65% since 2011. The NYC Clean Heat program transitioned into the NYC Retrofit Accelerator, New York City's one

¹⁸ <http://www.ehhi.org/reports/diesel/summary.shtml>

stop resource to help building owners and operators increase the value and sustainability of their properties through energy and water upgrades.

As a result of the success of the B2 requirement, in 2013, largely facilitated by the NYC Clean Heat program, New York City Council enacted Local Law 107 to both implement and study the use of higher biodiesel requirements in heating fuel. With the City leading the way, Local Law No. 107 required that all No.2, No.4 and No.6 heating oil purchased for use in any building owned by the City contain at least five percent biodiesel by volume, also known as B5, by October 2014.

To test the technical and operational impacts of higher concentrations of biodiesel beyond B5, Local Law No. 107 also required the Commissioner of Citywide Administrative Services to institute a pilot program to use greater amounts of biodiesel in City owned buildings. The City, led by the Parks Department, has tested biodiesel blends 10 and 20 percent in ultra-low sulfur diesel over the last five years.

The results of the B5 mandate within City-owned buildings, the study examining the feasibility of a citywide B5 mandate and the B10 and B20 pilot programs provide valuable lessons that can inform Intro 642.

Local Law No. 107 for the year 2013 required all heating oil purchased for use in any building owned by the City of New York be B5 by October 1 2014. By June 30th, 2013 over 85 percent of the City's heating fuel was converted and by July 1st, 2014, the City had phased out all non-biodiesel blended heating oil. In total, through June 2015, the City successfully used over 102 million gallons of B5 or higher blends of biodiesel for its diverse stock of City-owned buildings and facilities reducing 56, 500 metric tons carbon dioxide – equivalent to removing almost 12,000 passenger vehicles from the road.

The New York City Department of Citywide Administrative Services (“DCAS”) has reported no operational or technical issues in transitioning to B5. However, the Department of Education has reported some valve leakage in boilers using No. 6 or No. 4 fuel oil blended with B5. This is likely a consequence of both the fuel blend and the age of the equipment as the heavier fuel oils are more viscous in nature and don't require as strict an isolation requirement as equipment operating on thinner oils. As biodiesel is less viscous than heavy fuel oils, and has solvent-like properties it tends to clean systems out that normally result in more efficient operations, however, in the case of boilers using No. 6 or No. 4 fuel oil this normally beneficial property may result in seepage in equipment not originally designed to operate with such fuels.

Beginning on October 1, 2014 the City initiated a B10 fuel oil heating pilot across 69 facilities managed by the Department of Parks and Recreation, Department of Citywide Administrative Services, Department of Education, Department of Environmental Protection, and Department of Sanitation. In addition, the Department of Parks and Recreation has used 20 percent biodiesel blends for more than 75 percent of its 115 facilities from fiscal year 2010 through fiscal year 2014. Parks used over 490,000 gallons of B20 in fiscal year 2011. This amount increased to over 560,000 gallons of B20 in fiscal year 2014 resulting in GHG emission reductions of 1,150 metric tons - the equivalent emissions from approximately 2.7 million miles driven by an average passenger vehicle.

Some challenges with the use of B10 and B20 have been observed. Specifically, fuel coagulation and clogging of burners and ancillary equipment have been experienced in heating units where there is limited turnover of the fuel – for example, with emergency

generators and interruptible or temperature- controlled accounts. The latter are heating units that primarily run on natural gas, but are required by tariff to switch to fuel oil when temperatures fall below a certain range. Biodiesel that sits for awhile can act like cooking oils that sit for awhile, congealing in colder weather. In these cases, short-term maintenance or clogging issues resulted, possibly due to biodiesel's solvent properties at higher blends and their use in older tank and building systems.

On June 5, 2015, the Mayor's Office of Sustainability, in coordination with the Department of Citywide Administrative Services (DCAS), published a report entitled "Technical and Economic Feasibility of Increasing the New York City Bio-heat Blending Standard to Five Percent Biodiesel (B5%)" ("B5 Study"). This report was a supplement to a May 2014 entitled "Biomass-Based Diesel and Heating Fuel Substitute Opportunities in New York City", which is included as an Appendix to the B5 Study. The feasibility study sought to answer the following questions: Is there enough supply for the increased demand of biofuel? How will the price of the fuel switch impact consumers? Will the increased demand for biofuel impact price? How will the fuel switch impact equipment needs and operations and maintenance? And, what can the City do to enable the successful transition of the market to the new mandates?

The biodiesel supply chain in and around New York Harbor is sophisticated. NYC has the infrastructure to receive produced biodiesel via truck, barge, vessel, and rail as well as production of regional biodiesel. Waterborne biodiesel is received into major storage terminals in New York Harbor and then transported primarily by barge, truck, and rail transports to distribution terminals. From the distribution terminals, biodiesel is blended with Ultra Low Sulfur Diesel (ULSD) for heating oil sales (No. 2 fuel), or with ULSD/No.6

blends to produce No. 4, and No. 6 heating oil for end-use consumption at residential and commercial locations. The biodiesel heating fuel supply chain includes producers, importers, marine companies, transporters, terminals and blenders, distributors, and end-users.

New York City can and does obtain its biodiesel from in-state production, out-of-state supplies, and imports from foreign markets. According to the National Biodiesel Board there are 17 biodiesel distributors in NYS, including 5 in the greater NYC area.¹⁹

The report estimated the annual increase in biodiesel demand as a result of a New York City B5 mandate could potentially be about eight million gallons per year. In addition, New York State introduced a bill that would require all heating oil sold in the City of New York, Nassau, Suffolk, Westchester, and Rockland counties contain at least two percent biodiesel by October 1, 2015 and all heating oil sold elsewhere in the state to meet this standard by July 1, 2016²⁰. If this bill were passed and signed into law, this could add an additional ten million gallons per year biodiesel to the demand in New York State. This potential increase of 18 million gallons per year is only 1.5 percent of current U.S. biodiesel production and should be adequately met by an industry with a number of underutilized biodiesel refineries. Moreover, with existing imports in New York Harbor of about 57 million gallons in 2013 and 25 million gallons per year in 2014, there should be solid market sources for biodiesel to meet the NYC demands as well as NYS demands. To assess the impact of an increased biodiesel blend in heating oil on consumers, it is important to first understand the different factors involved in the production and blending

¹⁹ National Biodiesel Board, "Biodiesel Distributor Listings," <http://www.biodiesel.org/using-biodiesel/finding-biodiesel/locatedistributors-in-the-us/biodiesel-distributor-listings>, accessed May 21, 2015.

²⁰ Engelbright. Intro. 6070-A. Relates to bioheating fuel. In Assembly. 2015

of biodiesel blends. The suppliers are entities who either refine or purchase ULSD from refiners or traders, and who also purchase biodiesel from producers. The suppliers purchase biodiesel blends, such as B2 and B5 at wholesale prices and then mark up their costs to secure and transport wholesale volumes of ULSD and biodiesel to sell to distributors. Distributors then sell these products at retail. The absolute impact prices for consumers is based on market and competitive situations throughout this multi-layered supply chain.

Overall, the price of biodiesel tracks closely to ULSD and has been competitively priced since January 2011, coinciding with the reinstatement of the biodiesel mixture excise tax credit (also known as the biodiesel blenders credit), which provides a tax credit of \$1.00 per gallon of pure biodiesel. According to data from the Oil Price Information Service, the wholesale price for B5 in the Bronx during the period between October 2014 and March 2014 was 2.85 cents per gallon more than ULSD, while for the same period the wholesale price was 0.90 cents per gallon cheaper than ULSD in Manhattan. Long Island showed a consistently lower price of B5 relative to ULSD since mid-2013 to June 2015, at an average of 4 cents per gallon. Further, Argus Media, a major fuel price reporting service, has reported that over the past 44 months (since July 2012), biodiesel pricing at New York Harbor has been on average 20.31 cents less expensive per gallon than petroleum heating oil and has been cheaper 38 of those 44 months. Based on this data, the cost of biodiesel appears to be in parity with ULSD.

It is important to note that any fluctuations in the price of biodiesel will have a smaller impact on consumers than an increase in the absolute price of oil. For example, a \$1 per gallon increase in biodiesel price may affect heating oil wholesale prices by about 5

cents per gallon; however, a \$1 per gallon rise in diesel prices would create an approximate \$1 per gallon increase in consumer costs.

Currently, all boiler manufacturers provide a warranty for biofuel blends up to B5, while only a few manufacturers' warranties cover biofuel blends over B5. The new ASTM standard, ASTM D396-15b, "Standard Specification for Fuel Oils", provides performance specifications for six to 20 percent biodiesel in No. 1 and No. 2 fuel oil for use in domestic and small industrial burners. The ASTM standard does not apply to No. 4 or No. 6 fuel oil. As part of the DCAS City pilot, there were operational issues for the vendors with blending and transporting D4 and D6 with B10 and B20. The Pilot therefore utilized No. 2 fuel oil with blends of B10 and B20. It did not integrate B10 and B20 blends in No. 4 fuel oil. Under current law, No. 4 Heating Oil will be phased out of city buildings by 2030, and we would like to see it phased out even sooner. This bill would require B10 to be instituted in 2020. There currently is no ASTM standard applicable for the B10 in No. 4 fuel oil blends.

Recognizing (i) that the full impacts of operating existing boilers on fuel blends not originally designed for such, (ii) that the ASTM D396-15b does not cover the full universe of fuel oil blends that are currently permitted and (iii) other market uncertainties, we believe it is prudent to include provisions that provide sufficient flexibility to mitigate any problems that may arise in the course of implementing legislation that mandates the use of these fuel oil blends. A waiver provision similar to that now included in the law with respect to B2, as added by local law number 43 for the year 2010, would serve as a good starting point and we are open to working with the

Council and others to develop effective strategies to transition to the use of cleaner fuels.

We will now shift our attention to Intro 880. Over the past several years, the Council has taken important steps to protect the health of the City's schoolchildren through a series of local laws that seek to reduce emissions from City school buses. Most recently, the Council enacted Local Law 38 for the year 2015 which, among other things, will require school buses that are not utilizing a closed crankcase ventilation system due to physical restraints to be phased out of the City's fleet by 2020. As already noted, children's developing lungs are especially affected by particulate matter emissions, which are directly correlated with asthma and other respiratory diseases. New York City's asthma corridors have some of the highest rates of asthma in the US, and tend to be in some of the poorest parts of the city. Children who suffer from asthma miss more days of school, while their parents miss work. Reducing their exposure to the pollutants that contribute to asthma will mean fewer school and work absences, fewer hospitalization and health care costs, and improve the ability of families to get on the path to economic security, as well as a brighter future for the children.

Intro 880 builds on the work that the Council has done in this area and would require diesel powered school buses that are owned, operated, or contracted by the City to be powered by fuel that is both ultra-low sulfur diesel fuel and at least five percent biodiesel (i.e., B5). To clarify a point regarding the scope of Intro 880, we understand this bill does not apply to school buses that run on unleaded gasoline, which comprise approximately 28 percent of the school bus fleet.

The benefits of B5 have been discussed. They include GHG emission reductions and air quality improvements. Also discussed were supply and price. As noted, there is adequate supply to meet the incremental increase in demand and it appears that price parity exists. As with any commodity, biodiesel is subject to price volatility, but the B5 study did not indicate that the price volatility for biodiesel would be any different than that of conventional diesel. In fact, it suggests that price volatility of biofuels are dampened as a consequence of blending. Consequently, price and volatility are likely not compelling reasons to limit the expansion of biodiesel in city owned, operated, or contracted buses. In addition, the City has ten years of experience with using biodiesel, in blends of B5 to B20 in its own diverse fleet, including buses.

A potentially more serious impediment to wider use of biodiesel in City owned, operated, or contracted school buses could be the availability of biodiesel at retail locations. Some companies with which the Department of Education contracts fuel school buses at their own private fueling stations, which allows them to influence the type of fuel that is procured and used in the buses. But a portion of contracted buses fuel at retail sites, where biodiesel blends are not commonly available. The biofuel requirement posed by Intro 880 therefore makes it impossible today for companies that rely strictly on retail fueling to comply without an expansion of biofuels at retail locations, with potentially disproportionate impacts on small-to-medium sized enterprises, which includes MWBE contractors. This could have significant contracting implications for the Department of Education as well as serious business implications for school bus fleet operators that rely on retail fuel stations.

In conclusion, the administration supports the goals of Intro 880 to improve the cleanliness of bus fuel, support the health of schoolchildren and City residents, and reduce greenhouse gas emissions. We look forward to working with the Council and school bus operators to pursue practical opportunities to reduce emissions from these vehicles going forward, particularly as biodiesel availability improves.

Intros 642 and 880 are both aligned with the sustainability goals outlined in OneNYC and the Office of Sustainability agrees with the intent of this proposed legislation. We hope these suggestions help to strengthen the bills and foster the implementation of low carbon energy solutions in New York City, as well as help us reach our goal to have the cleanest air quality of any large US city. The Administration looks forward to working with the Council to further refine the proposed legislation in a way that allows the City to meet the equity, resiliency, and sustainability goals laid out in OneNYC.



National Biodiesel Board
1331 Pennsylvania Ave., NW
Washington, DC 20004
(202) 737-8801 phone

National Biodiesel Board
605 Clark Avenue
Jefferson City, MO 65110
(800) 841-5849 phone

Written Testimony of Mr. Shelby Neal
Submitted to the New York City Council Committee on Environmental Protection
October 26, 2015, 1 p.m.

Good morning Chairman Constantinides and members of the Committee. I appreciate the opportunity to testify today on Int. No. 642 and Int. No. 880, legislation to increase use of cleaner-burning biodiesel fuel in school busses and space heating applications.

My name is Shelby Neal. I serve as the Director of State Governmental Affairs for the National Biodiesel Board (NBB). The NBB is the trade association that represents the nation's biodiesel and renewable diesel production facilities, marketers, and feedstock producers. The association serves as the coordinating body for research and development in the United States.

Biodiesel is a renewable diesel replacement fuel that has been designated an "Advanced Biofuel" by the U.S. Environmental Protection Agency (EPA). The fuel is made from byproducts and co-products of other industries such as agricultural oils, fats, and waste greases. Biodiesel is refined to meet a specific ASTM International fuel specification and decreases harmful emissions by more than 50 percent. Currently over 150 biodiesel plants exist in the U.S. with a combined production capacity of more than 2.5 billion gallons. Each of the past two years, the industry has produced in excess of 1.5 billion gallons of biodiesel from sustainable, domestic sources.

Biodiesel is most commonly marketed as a five percent (B5) blending component with conventional diesel fuel, but is increasingly used in concentrations up to twenty percent (B20) to optimize the fuel's emissions and greenhouse gas reduction benefits. Biodiesel is distributed utilizing the existing fuel distribution infrastructure with blending occurring both at wholesale fuel terminals and "below the rack" by fuel marketers.

As you know, the City of New York has been a leader in alternative fuels and, specifically, biodiesel. In October of 2012, the City implemented the nation's first citywide standard for Bioheat®—a mixture of biodiesel and conventional heating oil. Even prior to implementation of this policy, New York was the largest municipal user of biodiesel with most vehicles and buildings voluntarily using low to mid-level biodiesel blends year-round. New York City has been a true pioneer, leading the way for others around the nation.

With regard to the legislation being heard today, the NBB supports both bills. We view increasing the Bioheat® fuel standard and extending the emissions benefits of biodiesel to children (through school busses) as a logical next step in the City's leadership on clean fuels issues. However, if given a choice, we would prefer the more conservative approach toward Bioheat® legislation that has been proposed by the New York Oil Heating Association. We have always placed a high value on moving forward with allied industries in a consensus manner.

On this and the following page, I have addressed issues that are frequently misrepresented by opponents of clean fuels such as the American Petroleum Institute (API) and organizations to which it provides funding.

Greenhouse Gas (GHG) Benefits

According to both the U.S. Environmental Protection Agency and the California Air Resources Board (CARB), biodiesel's GHG emissions are 50-80% lower than petroleum diesel fuel.

Biodiesel Emissions Properties

Biodiesel in 15ppm Ultra-Low Sulfur Heating Oil (ULHO) provides significant reductions such as the following:

- 90-95% for Polycyclic Aromatic Hydrocarbons (PAH), cancer causing compounds;
- Up to 15% reductions in carbon monoxide (CO), a poisonous gas; and
- 100% reductions in hydrocarbons, a contributor to smog formation.

In on-road applications, benefits include:

- 75 to 85% PAH reductions;
- 47% Particulate Matter (PM) reductions; and
- 48% CO reductions.

Int. No. 642 and 880 would reduce toxic chemicals in New York City's airshed by millions of metric tons annually.

Biodiesel and NOx Emissions

A comprehensive study conducted by the National Renewable Energy Laboratory (NREL) in 2006 concluded the following about biodiesel's on-road NOx emissions: "Considering all available data, we conclude that B20 has no net impact on NOx emissions." According to Brookhaven National Laboratory, biodiesel used in space heating applications "seems to lead to...lower NOx emissions." Studies show results ranging from similar to petroleum to reductions of 30%.

Biodiesel in Cold Weather

According to a study by the Cleveland Technical Center, B5 blends are not materially different than petroleum diesel, showing less than 1 degree Fahrenheit (F) difference in cold flow performance. B10 blends exhibited acceptable cold flow properties down to ambient temperatures of -22F, while B20 blends exhibited acceptable performance down to -12F. Depending on the cold flow properties of the petroleum diesel in the blend, higher levels of biodiesel such as B20 may require use of cold weather additives.

Notable B20 winter users include Glacier National Park, Harvard University, Denver, Aspen and, of course, the City of New York.

Compatibility and User Experience

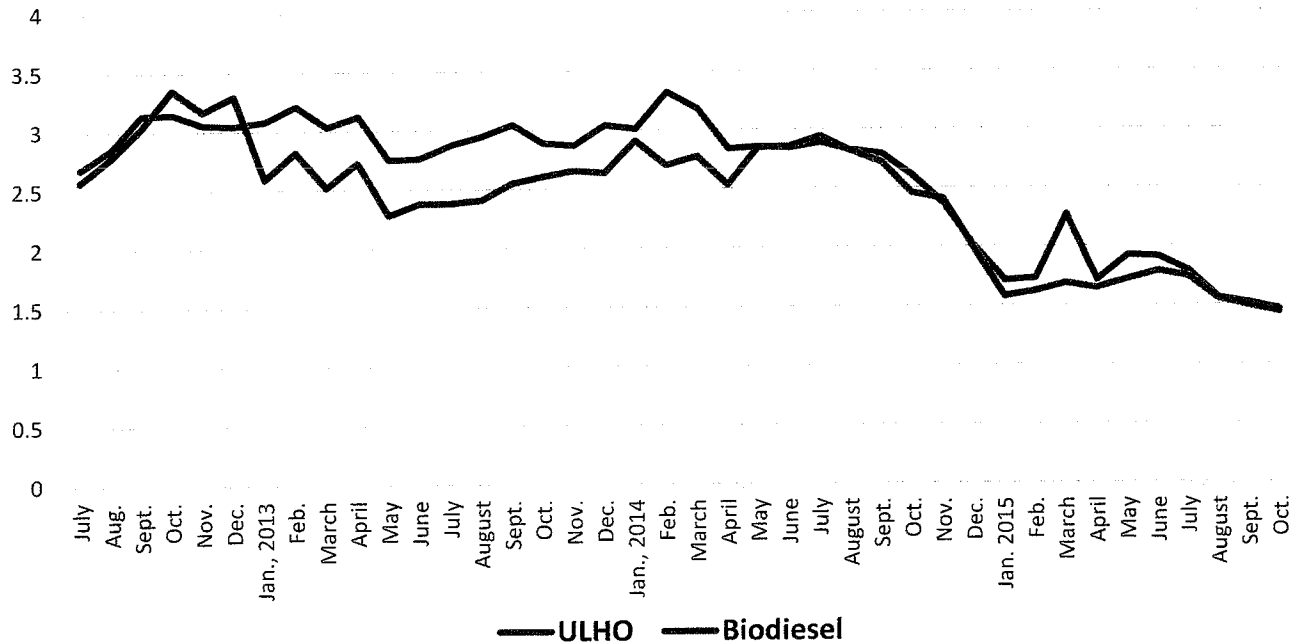
An April, 2014 study published by Brookhaven National Laboratory concluded that "The technical data all indicate that B20 and lower blends will perform as expected in the existing equipment base without modification. Higher blends also perform as expected, however, as blend levels approach 100 percent, adjustments to the flame sensor system may be required due to the cleaner burning nature of biodiesel."

Is the Bioheat® Bill a “Mandate?”

We have always objected to the word mandate because it misrepresents the dynamics of the situation, implying a certain level of hostility which clearly does not exist. In this case, for example, New York’s heating oil dealers—the “mandated” community—are requesting that the fuel standard be amended to include at least 5% biodiesel. We applaud their desire to improve the product they deliver to homeowners by supporting a higher, better, and more healthy fuel standard.

Biodiesel Pricing

According to a major price reporting service, biodiesel has been less expensive than petroleum diesel 38 of the past 44 months. The chart below illustrates wholesale pricing of biodiesel and petroleum heating oil (ULHO) since July of 2012.



In Conclusion

We appreciate the continued efforts of Chairman Constantinides’ as well as those of the entire committee. The National Biodiesel Board is pleased to support both Int. No. 642 and Int. No. 880, important pieces of legislation that will benefit generations of New Yorkers to come.



Medford Township Public Schools
137 Hartford Road
Medford, New Jersey 08055
Phone – (609) 654-6416 Fax – (609) 654-7436

October 23, 2015

Mr. Shelby Neal
Director of State Governmental Affairs
National Biodiesel Board
PO Box 104898
Jefferson City, MO 65110

Dear Shelby,

“I owe you an apology.” This comment was uttered to me by a skeptical school bus driver seventeen years ago. On November 17, 1997 Medford Township Public School district, in partnership with the New Jersey Board of Public Utilities (NJBPU), launched the State’s first alternative fuels program using Biodiesel in a school bus fleet. As you might imagine this new and innovative program was met by a fair amount of resistance on the part of our school bus operators. I heard a number of concerns such as...“How will this new fuel work in our buses?” Will our engines shut-down?” Will the buses really run on soybean oil?” How will my bus perform in the winter?” The genesis of these concerns were not based on factual information as to the performance of Biodiesel, they were simply a visceral response to an unknown. As you will see in the following text, these concerns quickly evaporated.

Over this time period, our data collection, emissions testing, and performance profiles have shown that, not only did Biodiesel dramatically reduce the harmful diesel school bus emissions, it did so reliably and cost effectively. I understand a hearing is scheduled in our neighboring state to the north to deliberate the validity of Biodiesel. I wish I had room in this letter to provide you with the details of our program. I can, however, provide you with the critical, real world experiences as they relate to our program. This information will, in my opinion, provide compelling evidence that supports our Board’s position to continue using Biodiesel over these many years.

Cold Weather Performance –

In 1995 I shared with our Superintendent my recommendation to partner with the State to evaluate a new fuel called Biodiesel. I made it very clear that should the use of Biodiesel in any way jeopardize the safe transportation of our students, I would cease the program immediately. He agreed and allowed me to pursue the project. In the early part of our program, there were rare instances of cold flow issues. The industry’s response was swift and effective. Standards ensuring the fuel’s cold weather performance were established. Protocols for the transportation and handling of the product were developed and distributed. Production modifications, such as cold filtering, to remove constituent contaminants were also implemented. The winter of 2015 was particularly difficult. I can state, with extreme confidence, that the performance of Biodiesel, we use a blend ratio of 20% Biodiesel (B20), never presented a disruption of service last winter or over the past seventeen years.

Our K-8 district is in a suburban/rural community located in South Jersey, in an area known as the Pinelands. Our buses travel and transport roughly 3,400 students daily in some semi-remote areas. We cannot afford to have our buses breakdown due to poor fuel performance. If Biodiesel performed so poorly during the winter months that we experienced a high fail rate, the Board, and I, would not permit its use for such a long period of time.

Environmental Impact –

The developing lungs of a child, higher respiratory rates and deeper breathing, make them more susceptible to poor air quality. Adolescent Asthma is also on the rise. The majority of our students are transported to school. For us, it is critical we reduce a child's exposure to harmful emissions, both mobile and stationary. Many studies have shown that the air quality within a diesel school bus is significantly more hazardous than the surrounding outside air. It was a requirement of our federally funded program to perform pre and post emission tests on our buses using an USEPA approved laboratory. The results of those tests revealed that Biodiesel significantly reduced targeted hydrocarbon emissions and, contrary to typical results, also reduced oxides of nitrogen emissions. There was a slight elevation of carbon dioxide, however, the overall carbon impact of the production of Biodiesel, as compared its petroleum counterpart, based on energy ratios, is far lower. More importantly, relating to developing lungs, the emissions test concluded that the diesel particulate matter emitted by the Biodiesel fueled buses was reduced by 35%. In addition to emissions tests conducted by the USEPA certified lab, the New Jersey Department of Environmental Protection (NJDEP) conducted opacity tests on all of our buses. The results of their tests revealed that a significant reduction in particulate matter was achieved by all the Biodiesel fueled buses, including those buses built in the early 1990's, in most cases by 50%. This fact alone is a tremendous health benefit to not only our students, but to our drivers, and the community at large.

Cost –

Our program demonstrated that Biodiesel met our performance requirement and drastically lowered harmful tailpipe emissions. Biodiesel use was also found to lower our fleet operating expenses. Another requirement of the demonstration program was to collect and analyze performance data of the test and control group of buses against a pre-established baseline. A report issued by the NJBPU at the conclusion of our program indicated that the cost to operate the buses running on Biodiesel fuel were \$0.02 per mile less as compare to the buses running on conventional diesel fuel. Our information showed that this reduction is related to the extended life of exhaust system due to lower soot levels; fewer replacements of fuel system components due to Biodiesel's higher level of lubricity as compared to Ultra Low Sulfur Diesel Fuel (ULSD); and the higher oxygen content of the fuel resulted in lower engine idle vibration. This reduced the need to service and/or replace radiator, hood, and mirror components.

In the course of the past seventeen years our fleet of school buses have traveled over eight million miles, all of them using Biodiesel. This equates to a cost reduction to fleet operations of roughly \$160,000 during that period. There is a costs premium for our use of Biodiesel. The price of our Biodiesel blend has fluctuated over the years, however, I estimate our average premium to be roughly \$0.12 more for B20 as compare to ULSD. We have consumed roughly 964,000 gallons of Biodiesel over the past seventeen years. This equates to roughly \$116,000 in added fuel costs, far less than the savings gained in operating expenses. In addition, due the success of our program, in 2002 the NJBPU created the Biodiesel Rebate Program. This program reimbursed New Jersey public entities using Biodiesel the incremental cost difference between B5, B10, B20, etc. (blend rates determined by the public entity) and petroleum diesel fuel. Regrettably, due to economic pressures, the program was eliminated in 2006. For the first nine years of the program, our partnership with the US Department Energy and the NJBPU created opportunities to reimburse the district for the incremental cost of the Biodiesel fuel. Nevertheless, the reductions in operating expenses outweigh the premium paid for the fuel, easily making the decision to use Biodiesel budget neutral.

Economics, Energy, Education, and the Environment –

Parents trust to us with their two most precious possessions, their children and their money. Our prime directive is to fiercely protect both. But we are also expected to deliver the best education possible. As a district we learned much from our Biodiesel program. One vital aspect was redefining the meaning of "value". Value can be described in many ways. For some, efforts must return an economic value. For others value is

defined by engaging in activities that reduce negative effects on the environment. For Medford Township Public Schools, value means providing a rich educational experience for our students. To explore and, where appropriate, implement practices and programs that will enhance learning environments. We value relationships that broaden learning opportunities. We look to offer challenges that develop problem solving skills to prepare our children for what lies ahead.

We also believe it is our obligation to lead by example. Our experience with Biodiesel exposed us to a number of innovative and effective strategies that helped us become more efficient. To put it simply, our use of Biodiesel was a catalyst for change. We have embraced an "all the above" approach to our energy needs. Four of our seven schools use geothermal technology to heat and cool the buildings. Medford Township Public Schools also built New Jersey's largest collective solar electric array without using a penny of taxpayer dollars. These programs have saved our residents hundreds of thousands of dollars. It is anticipated we will save several million dollars over the next ten years. This money can then be re-allocated back into the classroom to support our educational goals.

This model also holds substantial educational benefits for our students. We now use our facilities and systems as "learning labs". It is truly a thrill to see how engaged our students become when we answer their questions by using "real world" problems with resources that are literally at their fingertips.

In Conclusion –

Now let's go back to my opening statement. The reason that driver apologized is this...she initially did not believe that Biodiesel would have any meaningful impact. She believed it would cause problems. As a driver of our handicapped students, she transports our most fragile children. After several weeks of using the fuel, she shared with me the following story. During the winter months, in order to preserve the heat in the school bus, her wheelchair bound students are loaded and unloaded while the bus is running. Prior to changing the fuel, the exhaust from her diesel bus would irritate one of her children with respiratory difficulties. She informed me that roughly a month after switching to Biodiesel there was a noticeable difference in that child's breathing during loading and unloading. That child no longer struggled to breathe. The only change was biodiesel. That child wasn't concerned with facts and figures, reducing a daily struggle was far more important.

As a district, our mission is to make decisions that improve our community. There is no question that Biodiesel and our sustainable strategies work together to satisfy that mission.

Making this one simple, but significant, change demonstrated leadership, reduced our environmental impact, improved our operations, reduced our costs, broadened the educational opportunities for all of our students, and made one student breathe easier.

There are many more examples I could share that support the district's decision to evaluate Biodiesel's performance along with reasons why we continue to use the fuel. I would be happy to share them should the need arise.

Should you have any questions or require further information please do not hesitate to contact my office at 609-953-5841 extension 1507.

Warmest Regards,



Joe Biluck Jr.
Director of Operations & Technology

October 26, 2015

New York City Council Environmental Protection Committee

Dear Chairman Constantinides:

My name is Ling Tsou. I'm a co-founder of United for Action, a grassroots all volunteer activist group based in New York City advocating for ending our addiction to fossil fuel and nuclear power and implementing renewable energy for a sustainable future.

Thank you for introducing Int 642. This bill will gradually increase the minimum percentage of biodiesel in the city's building heating oil from the current 2% to 20% by October, 2030. Increasing the percentage of biodiesel in the heating oil will increase the benefits derived from the original legislation by helping to further reduce greenhouse gas emissions and air pollution. Biodiesel fuel can be used in any #2 boiler, diesel car or truck, diesel generator or construction equipment. None of these uses require any modifications to the equipment or vehicle. With the help of the New York State Clean Heating Fuel Tax Credit, residential consumers may find the price competitive with natural gas without the substantial upfront costs of a natural gas conversion.

We also support Int 880 introduced by Councilmember Helen Rosenthal requiring city owned, operated or contracted school buses to use ultra low sulfur diesel fuel and contain at least 5% biodiesel.

As demand for biodiesel increases, hopefully this will bring about increased production of biodiesel and decrease in pricing so we may see many more buildings heated with 100% biodiesel, school buses and New York City MTA buses run on 100% biodiesel. This will in turn help to drastically reduce greenhouse gas emissions.

The only way to slow and reduce the impact of climate change is to end our reliance on fossil fuel including coal, oil, gas and nuclear power and use renewable and clean energy like solar, wind, geothermal and biodiesel. I wish to thank the New York City Council for enacting legislations to lead New York City in that direction.

Thank you.

Sincerely,

Ling Tsou

United for Action

STATEMENT OF KAREN B. MOREAU

Executive Director

API - NEW YORK

Before the

NEW YORK CITY COUNCIL COMMITTEE ON ENVIRONMENTAL PROTECTION

Int. No. 642 - In Relation to the Use of Clean Heating Oil in New York

October 26, 2015

Committee Room, City Hall

New York, NY 10007

Good afternoon, Mr. Chairman and Members of the Committee on Environmental Protection. I am Karen Moreau, Executive Director of API – New York. We are a division of the American Petroleum Institute (API), which is the only national trade association to represent all aspects of America’s oil and natural gas industry. We support 9.8 million U.S. jobs and 8 percent of the U.S. economy. Our more than 600 corporate members are producers, refiners, suppliers, pipeline operators and marine transporters, as well as service and supply companies that support all segments of the industry. Locally our members include BP America, Marathon Petroleum Corporation, ConocoPhillips, ExxonMobil Corporation and Shell Oil Company.

Thank you for this opportunity to submit comments on Int. No. 642, relative to the “use of clean heating oil in New York.” Before I address our specific concerns, I would like to dispel a common misconception that the oil and gas industry is opposed to alternative fuels or in this particular instance, biofuels. Our industry is not opposed to the development and use of these fuels. We recognize that to meet the expected increase in demand all options should remain on the table – our nation needs all sources of commercially viable energy, as well as greater commitment to energy efficiency and energy conservation. From 2000-2014, the U.S. oil and natural gas industry invested about one-third of total dollars spent on Greenhouse Gas (GHG) mitigating technologies. This industry spent \$90 billion in GHG mitigating technologies whereas all other U.S. industries – automotive, electric utilities, agriculture and food processors – invested about 102.8 billion, and the federal government invested about \$110.3 billion. This industry

also was responsible for approximately 17 percent, or \$14.8 billion, of all investments in non-hydrocarbon resources, including investments in wind, solar, geothermal, and biomass technologies. This industry has poured money into developing alternative energy solutions to meet demands for cleaner more efficient energy and reduced 2014 emissions by the equivalent of 55.5 million metric tons of CO₂ compared to the previous year – equal to taking 11.8 million cars off the road.

What the industry does oppose, however, are government mandates. In imposing mandates, particularly in the energy sector, the government is essentially picking the “winners” and “losers” in fuel options. Such decisions are often made in a vacuum without consideration of market realities. Mandates traditionally mean a loss of flexibility that would ordinarily permit the market to seek the most favorable solutions in terms of the environment, in terms of available and proven technology, in terms of adequate and secure supply, and in terms of competitive prices.

INTRO. 642

Environmental Impact

As the Council knows, since November of 2012, all heating oil sold in New York City is required to contain two percent biodiesel content, or B2. However, the Council should be mindful that Intro. 642 – a mandate to increase the requirement in heating oil from B2 to B5 for all buildings in New York City by October 2016, and then increase to B20 by 2030 – would actually result in higher net emission of nitrogen oxide, which contributes to ground level ozone. Furthermore, the adoption by New York State of Ultra Low

Sulfur Diesel (ULSD), which is 15 parts per million, several years ago led to a 95 percent reduction in particulate matter. The proposed increase in biofuel content to B5 then B20 would offset these improvements by increasing particulate emissions. In general, estimated climate benefits from replacing petroleum fuels with biofuels are about zero, according to the International Institute for Sustainable Development. Biofuels are a renewable energy source derived from organic material such as plants or commercial and agricultural waste such as used cooking oil. Unfortunately, this requirement can have detrimental repercussions. The U.S. Energy Information Administration (EIA) data shows that one-quarter of biodiesel imports to the East Coast came from Indonesia in the last year, where the principle biodiesel feedstock is palm oil. According to the New York Times Editorial Board: "Palm oil's advantages as a cleaner fuel are clearly outweighed by the deforestation it causes." Secondly, biodiesel produced from soybean oil is land intensive, requiring four times more farmland than ethanol for the same amount of energy. Significant increases in soybean oil for biodiesel put pressure on available land for other food and feed production. Biodiesel demand alone has been blamed for an increase of 74 cents per bushel, or roughly 8 percent, in the price of soybeans. Higher-cost soybeans affect the economy because of their use in hundreds of other products ranging from crayons to animal feed.

Cost Increase of Heating & Food

Another concern is whether food should be used for fuel. This practice increases the level and volatility of food prices, in the United States and around the world. The environmental benefits of food-based and land-intensive biofuels are questionable at best. In 2012, a top United Nations official called upon the United States to suspend its

biofuels mandates to help avert a looming global food shortage. His comments were prompted by a surge in corn prices when the crop was decimated by drought. “Much of the reduced crop will be claimed by biofuel production in line with U.S. federal mandates, leaving even less for food and feed markets,” said Jose Graziano da Silva, director-general of the UN’s Food and Agriculture Organization in a *Financial Times* op-ed. Ultimately, biofuels contribute to hunger by driving up the cost of food and increasing volatility. These higher food and energy costs place a burden on the most vulnerable segments of our population – minorities, the elderly and hardworking low and middle-income families. To complicate matters, biofuels reduce energy efficiency because they require more fuel to produce the same amount of heat. The greater the content of biofuels, the lower the energy density. This lower energy density reduces efficiency, which in turn means higher costs and more frequent deliveries of biofuel.

In fact, the states of Maine and Massachusetts studied the possibility of mandating biofuels and decided not to move forward because of cost. B2 mixtures generally cost about 3 to 5 cents per gallon more than traditional heating oil and a B20 mix could cost about 20 to 30 cents more per gallon, according to a recent study by Wesson Company. The Department of Energy’s *Alternative Fuel Price Report* shows that retail prices for biodiesel have been 40% higher than diesel fuel this year. It’s difficult to justify the higher cost of biofuel when New York already has the highest heating oil costs in the country. New York has the largest heating oil market in the country as 33 percent of all families (2.7 million), and tens of thousands of businesses use heating oil, according to the New York State Energy Research and Development Authority (NYSERDA).

Biodiesel producers are pursuing an extension of a production tax credit of \$1.00 per gallon. There is a question as to whether or not the subsidy will continue since biofuel production hit over 1.5 billion gallons last year. Why should NYC mandate and subsidize an artificial market for biodiesel?

Infrastructure

Biodiesel can present infrastructure challenges as well. Biodiesel cannot be shipped via common carrier pipelines due to concerns related to jet fuel contamination; therefore it's shipped by rail, truck or barge, where it is blended with diesel. Biodiesel has poor cold temperature operability due to the presence of saturated fatty acids, thereby making B5 biodiesel fuel a less than optimal fuel choice for city-owned operated or contracted school buses, as proposed by Intro. 880. Biodiesel storage tanks need to be heated and/or insulated, particularly in colder climates. To ensure a proper blending, biodiesel must be kept 10 degrees Fahrenheit above the cloud point for blending to successfully avoid forming crystals or gel in the mixture. High cloud point bio-feedstock with a high blend of biofuel is problematic in cold weather conditions. In order to address cold weather operability, additives must be blended in the fuel which adds to the cost. Also, biodiesel is biodegradable and therefore is more susceptible to biological growth during storage. The National Biodiesel Board recommends its use within six months.

Above all, in considering this legislation, the Council should weigh the overall benefit to the environment and at what cost. For the first time in years, the cost to the consumer for gasoline and oil is decreasing as a result of the shale energy revolution. Yet now New York City is proposing additional costs for the consumer by increasing the amount of biofuel contained in home heating oil. According to the EIA, the average cost

to heat a home in the Northeast with natural gas is about half the cost of heating with oil. Why make homeowners who don't have access to low cost clean burning natural gas pay more for bioheat when they already pay twice as much for oil than natural gas?

We hope that the Council will consider these comments in the light in which they are intended, which is to highlight the paramount importance of ensuring the most cost-effective and environmentally safe heating alternative for the residents of New York City. This month, the U.S. EIA released statistics that show household heating costs are expected to be lower than the previous two winters based on lower fuel prices and warmer weather. Mandating a premium or "boutique" fuel eliminates consumer choice, and deprives low and middle income households of the projected energy savings brought about by increased domestic oil production, with minimal environmental benefit. Because of the above concerns, we oppose this legislation. Thank you for the opportunity to present our industry's views.



Written Testimony of Scott Hedderich
Submitted to the New York City Council Committee on Environmental Protection
October 26, 2015

Chairman Constantinides, members of the Committee, thank you. I appreciate the opportunity to testify before you today on two important bills (Int. No. 642 and Int. No. 880) touching upon the use of biodiesel in home heating oil and in school buses in order to improve the environment for New York City residents.

My name is Scott Hedderich, I am Director of Corporate Affairs for Renewable Energy Group REG. Renewable Energy Group, Inc. is a leading North American advanced biofuels producer and developer of renewable chemicals. REG utilizes a nationwide production, distribution and logistics system to focus on converting natural fats, oils and greases into advanced biofuels and converting diverse feedstocks into renewable chemicals. With 11 active biorefineries across the country, research and development capabilities and a diverse and growing intellectual property portfolio, REG is committed to being a long-term leader in bio-based fuels and chemicals.

REG currently has more than 430 million gallons of owned/operated annual production capacity at biorefineries across the U.S., as well as over 20 terminal locations nationwide. That includes 6 locations we have in the New York metropolitan area with which we do business.

As the Committee's members are aware, biodiesel is a diesel replacement fuel that qualifies as an "Advanced Biofuel" under the federal Renewable Fuels Standard (RFS2) program. The fuel is made from agricultural oils, animal fats, and waste greases and is refined to meet a specific commercial fuel definition and specification. In order to readily qualify for the RFS2 biodiesel must meet the ASTM specifications within D6751. Biodiesel is one of the most tested alternative fuels in the country and the only alternative fuel to meet all of the testing requirements of the 1990 amendments to the Clean Air Act¹.

¹ The U.S. EPA has indicated that biodiesel made from soybeans reduces greenhouse gas emissions by 57 percent compared to petroleum. Biodiesel made from waste raw materials (used cooking oil, animal fats) is 86 percent better than petroleum. Biodiesel reduces carbon monoxide emissions by 45 percent and sulfur oxides by 98.5 percent. With respect to pollutants that directly affect human health issues such as respiratory illness and cancer, biodiesel reduces particulate matter emissions by 78.5 percent and hydrocarbons by 90 percent.

New York City has been a leader in initiatives to improve the health and well being of its residents through the use of environmentally friendly biodiesel. This city lead the way with a first in the nation implementation of a requirement to use biodiesel in home heating oil (B2 in residential and commercial buildings and B5 in city owned facilities). The City committed moving its fleet of diesel vehicles – the largest municipal fleet in the nation – to B5 and higher blends and that commitment has been codified into law.

The Committee today is hearing testimony on two bills which continue the move toward a cleaner and healthier New York City. Int. No. 880 and Int. No. 642 would require the use of 5% biodiesel in school buses utilized by city schools and establish a path for utilizing higher blends of biodiesel used in home heating oil over the next 15 years.

The two bills before the committee today are excellent pieces of legislation. The authors should be commended for their simplicity. In an era of draft legislation running dozens and sometimes hundreds of pages, these bills are a refreshing breath of fresh air. Albany, Washington and in fact many legislative bodies could well learn a lesson here.

Marriam-Webster defines visionary as ‘having or showing clear ideas about what should happen or be done in the future,’ the secondary definition is, ‘having a powerful imagination.’ While I believe these bills are indeed visionary, they do stand on the shoulders of previous legislation in support of improving the fuel New Yorkers burn to heat homes and move vehicles.

Much like the opposition will claim today, the opposition then used words like ‘can’t be feasibly done,’ ‘will raise costs,’ and ‘no scientific evidence such standards will improve the environment.’ The American Petroleum Institute used language like that in 2010 in opposition to New York state reducing the sulfur content in home heating oil. They used harsher language in opposing biodiesel in home heating oil here in New York City. Yet today, the city’s own data shows that by reducing the amount of sulfur and adding biodiesel into home heating oil, the air is cleaner in New York, there are fewer deaths and fewer asthma cases in vulnerable populations (NYC Community Air Survey 2013 <http://www.nyc.gov/html/doh/html/environmental/community-air-survey.shtml>). The vision was clear and the benefits true.

The use of biodiesel blends reduce emissions, including reductions in particulate matter; they have a direct and positive impact on the health of New Yorkers exposed sources of burning fossil fuels, like the diesel engines on the school buses used to transport our children – a group widely recognized to have increased sensitivity to toxins and environmental pollutants.

Biodiesel is widely available in the metropolitan area today. As I mentioned, our 6 terminals alone give us significant storage capability and can allow us to meet much of the city’s biodiesel needs. The New York market has a number of other active biodiesel suppliers ensuring both an adequate supply *and* effective price competition.

With respect to biodiesel in school buses, Int 880, **today B5 is fully warranted by every major diesel engine manufacturer selling vehicles in the US.** ASTM D975 establishes that petroleum distillate blends up to 5% are considered the same for testing and performance properties as petroleum based diesel fuel. In other words, B5 *is* diesel fuel.

It is also important to note, many school bus manufacturers, like Thomas and their engine partner Cummins, warranty their buses on fuel up to B20. And many large school districts have moved their fleet to higher blends of biodiesel like Orange County Florida – that’s Orlando to you and me – which has implemented B20(<http://www.schoolbusfleet.com/channel/green-school-bus/news/2015/03/16/district-runs-more-than-1-200-school-buses-on-biodiesel.aspx>).

The fuel is available today, at competitive pricing and will provide real tangible health benefits to school age children who ride these buses. Moving New York City school buses to B5 is a vision within our grasp and should be implemented as quickly as possible.

Int 642 would move the city into utilizing higher blends of biodiesel in home heating oil. The legislation sets out a reasonable path over 15 years to a B20 blend. Some will push back that this increase isn’t feasible – it’s too costly, we don’t have a standard, we don’t know how higher blends will perform in existing equipment. Simply put: Nonsense. Biodiesel today is cost competitive, ASTM has amended D396 to include blends up to B20, and there is hard data from Brookhaven National Laboratory that shows B20 blends perform as well if not better than B0 in equipment life cycle.

Some will argue that with a competitive price and positive emissions profile there is no need to do anything more, the product can compete in the marketplace on its own. To argue that is to deny the data and the clear health benefits of a cleaner fuel; it is also somewhat disingenuous. The marketplace today is not evenly balanced. There are still soft market barriers in place. Biodiesel does not enjoy the same market access as petroleum diesel or heating oil. To be certain, the marketplace today is considerably more open and accessible than 5 years ago; this legislation ensures that progress will grow.

Having said that, I recognize that the value chain has expressed concerns about moving beyond B5 in bioheat. I am a firm believer in the adage about crawling before one can walk. If we need to crawl for a while at B5, just as we crawled at B2, in order to build greater consensus for higher blends down the road, we would support amending the bill to drop the ramp up in the out years. It is an issue that can be revisited by this committee and the City Council in the years ahead

In conclusion, I would like to reiterate our support for these two bills. They’re great legislation with real tangible benefits for the citizens of the New York City. Thank you again for allowing me to testify today.



500 Kingsland Avenue
Brooklyn, NY 11222

PHONE 718 383 1400
FAX 718 383 6586

**Testimony of Daniel Gianfalla, President and Chief Operating Officer of
United Metro Energy Corporation
Before the New York City Council Environmental Protection Committee
Regarding Intros. 642 and 880**

October 26, 2015

Good Morning Mr. Chairman, members of the Environmental Protection Committee. My name is Daniel Gianfalla, President and Chief Operating Officer of United Metro Energy Corporation (UMEC). UMEC supplies and delivers ultra-low sulfur diesel fuel, biodiesel, bioheat, heating oil, gasoline and natural gas throughout the New York Metropolitan area, from terminals in Greenpoint, Brooklyn; Riverhead, Long Island; and Calverton, Long Island. UMEC is owned by John Catstimatidis, who also owns United Refining Co. a major oil refinery in Pennsylvania that contributes to U.S. energy independence through domestic oil production. Thank you for the opportunity to testify today.

UMEC has been a vocal advocate for New York City's bioheat requirements and has actively supported legislation to phase out numbers 4 and 6 heating oil. Over the past decade, UMEC is proud to have partnered with the New York City Council and the Mayor's Office, most recently supporting the 80% reduction in greenhouse gases by 2050.

Today, we enthusiastically support Intros 642 and 880. We believe both these bills will help reduce harmful carbon emissions and help to keep our City secure, economically competitive and vibrant. Intro 642 builds on the record of success that New York City has established with the pioneering B2 fuel standard for heating oil in residential and commercial buildings.

Since the law went into effect, the City has replaced more than 80 million gallons of petroleum with renewable domestic biodiesel. And in that time, the price of heating oil in New York Harbor actually decreased while air quality has improved.

Buildings produce over 75 percent of emissions, and Intro 880 will help continue to reduce those emissions. In fact, increasing our biofuel use to a 5 percent blend in home heating oil would be equivalent to taking 45,000 cars off the road.



500 Kingsland Avenue
Brooklyn, NY 11222

PHONE **718 383 1400**
FAX **718 383 6586**

Consumers clearly win here. Over the past three years of a B2 biodiesel requirement in New York City, on average, biodiesel has been less expensive than traditional heating oil in 30 of 37 months by almost 23 cents per gallon. And, the fact that bioheat requires no change in equipment, is also a big advantage to consumers.

United Metro Energy is a believer in what biodiesel has to offer the City of New York. We are in the final phases of building a biodiesel-processing plant – right here in Brooklyn – creating good local jobs and promoting energy independence. Designed to produce 50 million gallons per year of biodiesel, UMEC's processing facility will allow for the offset of 365,000 tons of carbon, or 730 million pounds, annually.

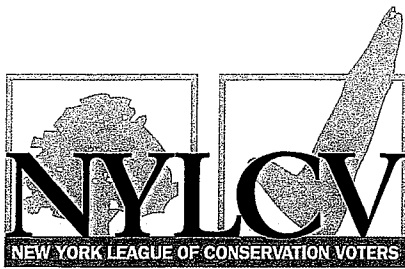
Moreover, a high percentage of biodiesel used for heating oil in New York City comes from recycled restaurant grease.

The same advantages that apply to using biofuels in buildings apply to vehicles. We support the goals of Intro 880 to require all New York City school buses - roughly 9500 vehicles - to use fuel that is a minimum of 5% biodiesel. This is the logical next step for New York City because the City has already successfully been using a variety of biodiesel blends in the City's fleet and most recently, City-owned marine craft, like the Staten Island Ferry. United Metro Energy has a great deal of experience with its own fleet in this regard. Currently, all of United Metro's trucks are fueled with Biomax, our enhanced, custom blended biodiesel.

Exhaust emissions from petroleum diesel fuel inhaled on a consistent basis have been linked to asthma and other respiratory conditions. We have an opportunity with this bill to reduce these pollutants and improve quality of life for New Yorkers.

We applaud Council Members Constantinides and Rosenthal and thank this Committee for your efforts in introducing legislation that promotes clean, green biofuels, as well as sensible clean-air policies.

Thank you for your time today.



October 26, 2015
Contact:
Ya-Ting Liu
(212) 361-6350 x203
yliu@nylcv.org

Memorandum of Support
Intro 0880-2015

A Local Law to amend the administrative code of the city of New York, in relation to the use of b-5 biodiesel fuel in city-owned, operated, or contracted school buses.

The New York League of Conservation Voters (NYLCV) supports Intro 0880-2015 sponsored by Council Member Helen Rosenthal.

The impacts of school bus pollution on children's health have been well documented. Yale University researchers demonstrated high pollution levels inside buses by attaching monitors to children's backpacks and recording the pollution levels during their trips to school. Another study found that while children may only spend a few hours per day on school buses, the high levels of exposure encountered on board school buses can add considerably to their daily and annual exposures to air pollutants such as diesel particulate matter and PM2.5. The California Air Resources Board found that school bus trips can increase children's daily exposure to black carbon up to 34 percent, compared to regular passenger cars. Particle (PM) levels inside a school bus can be 5-10 times the levels outside the bus.¹

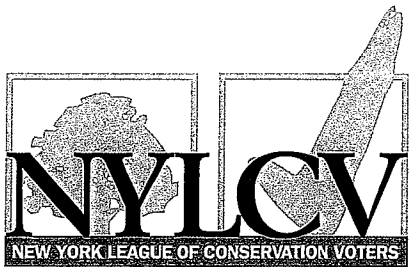
One important tool to cleaning up dirty school buses is retrofitting them with crankcase and tailpipe filters. Another strategy is to require cleaner burning fuels such as ultra-low sulfur diesel with biodiesel blends. Currently, Local Law 73 of 2013 requires each diesel fuel powered vehicle owned or operated by a City agency to be powered by an ultra-low sulfur diesel (ULSD) fuel blending 5% biodiesel (B5) by 2014 and 20% biodiesel (B20) by 2016, during warm weather months. Intro 0880-2015 would require that city-owned, operated or contracted school buses be powered by fuel that is both ultra-low sulfur diesel and at least 5% biodiesel blend.

Requiring the use of biofuels for New York City school buses is a big step to healthy air. New York City has already made tremendous strides in requiring the use of ultra-low sulfur diesel fuel and the best available retrofit technology to reduce emissions. Intro 0880-2015 will help keep up the momentum toward a cleaner, greener, healthier city.

For these reasons, the New York League of Conservation Voters urges the passage of Intro 0880-2015 this year.

¹ Environmental Defense Fund. "Cleaning Dirty School Buses" <https://www.edf.org/climate/cleaning-dirty-school-buses>





Contact:
October 26, 2015

Contact:
Ya-Ting Liu
(212) 361-6350 x203
yliu@nylcv.org

Memorandum of Support
Intro 0642-2015

A Local Law to amend the administrative code of the city of New York, in relation to the use of clean heating oil in New York City.

The New York League of Conservation Voters (NYLCV) supports Intro 0642-2015 sponsored by Council Member Costa Constantinides.

Heating oil containing biofuel burns cleaner and more efficiently than plain heating oil, reducing pollutants and cleaning the air. Currently, city law requires that all buildings blend 2% of heating oil with biodiesel and all city owned buildings blend 5% of heating oil with biodiesel. Intro 0642-2015 would expand and scale up the use of biodiesel by requiring all buildings to go to B5 in 2016, B10 in 2030, B15 in 2025 and B20 in 2030.

In order for New York City to achieve the ambitious eighty percent carbon reductions by 2050, we need to take every opportunity available to us that can help get us there, especially when it comes to cleaning up the city's one million buildings, which account for over 75% of the city's carbon footprint. Emissions from dirty heating oils are not only an environmental problem, but a threat to public health. Soot pollution in New York City causes more than 3,000 deaths every year from lung and heart disease. Switching to cleaner heating fuels is New York City's biggest step to healthy air.

New York City has already made tremendous strides in phasing out the heaviest and dirtiest No.6 and No.4 heating oils to cleaner alternatives. Between 2012 and 2015, the NYC Clean Heat Program resulted in nearly 6,000 heating oil conversions from No.6 or No.4 to a cleaner fuel. As a result, PM 2.5 emissions from buildings previously burning these heavy oils have been reduced by 65% since 2011. Intro 0642-2015 will help keep up the momentum toward a cleaner, greener, healthier city.

For these reasons, the New York League of Conservation Voters urges the passage of Intro 0642-2015 this year.





**HEARING TESTIMONY FROM
THE BUILDING OWNERS AND MANAGERS ASSOCIATION OF GREATER NEW YORK:**

**INT. NO. 642-2015: A LOCAL LAW TO AMEND THE ADMINISTRATIVE CODE OF NEW YORK, IN
RELATION TO THE USE OF CLEAN HEATING OIL IN NEW YORK CITY.**

The Buildings Owners and Managers Association of Greater New York (BOMA/NY) represents more than 750 owners, property managers, and building professionals who either own or manage 400 million square feet of commercial space. We are responsible for the safety of over 3 million tenants, generate more than \$1.5 billion in annual tax revenue, and oversee annual budgets of more than \$4 billion. BOMA/NY is the largest Association in the BOMA International Federation, the world's largest trade organization. We thank you for the opportunity to testify on this bill.

BOMA/NY recognizes the potential environmental and other benefits that using biofuels in building boilers can provide, including a decrease in emissions of greenhouse gases and some other pollutants, and we support the reasonable use of such fuels. As a member of the Mayor's Task Force for One City: Built to Last, BOMA/NY recognizes and is actively involved in the important work of reducing greenhouse gas emissions and cleaning our air. However, there is some concern regarding potential costs from this legislation over time, especially as oil prices are and may remain low, while biofuel costs could stay steady or even go significantly higher, either because of insufficient supply, production costs, termination of subsidies, or other causes. If this is the case, this legislation could impose high costs that might not cover benefits and might displace other, more efficient, emissions-reducing strategies. Therefore, the City Council should add language that would suspend the proposed requirements if biofuel costs are not similar to heating oil costs. BOMA/NY would be happy to work with the Council and other stakeholders to determine the proper approach to adding this mechanism to the legislation.

Thank you for accepting our testimony today. We look forward to working with you on this legislation.

New York Oil Heating Association, Inc.

Established 1939

Supporters of:
Empire State Energy Association
National Assn for Oilheat Research & Education
National Biodiesel Board
National Oilheat Research Alliance
Petroleum Marketers Association of America



Rocco J. Lacertosa
Chief Executive Officer

Officers:
Ted Kollar, President
Daniel Schildwachter III, VP
John McConville, Secretary-Treasurer
Vincent Allegretti, Immediate Past Pres

Testimony of Rocco Lacertosa, CEO of the New York Oil Heating Association Before the New York City Council Environmental Protection Committee

Regarding Intros. 642 and 880

October 26, 2015

Good Afternoon Mr. Chairman, members of the Environmental Protection Committee. My name is Rocco Lacertosa and I serve as the CEO of New York Oil Heating Association, a 75-year-old trade association whose members, for the most part, are made up of family-owned heating oil distributors and terminal operators located throughout the City of New York. Thank you for the opportunity to testify today.

The New York Oil Heating Association has played a vital and vocal role in advocating for the increased use of bioheat in New York City and supports the goals of Intro 642, to increase biodiesel blends in all heating oil for New York City buildings and Intro 880 which would set a fuel standard of B5 for schools buses.

Bioheat is a blend of renewable biodiesel and home heating oil and proven to be among our city's more effective tools to reduce carbon emissions, improve air quality and reduce dependence on foreign oil.

NYOHA and its members enthusiastically supported the B2 heating oil standard put in place in 2012 and has been at the industry forefront of distributing and promoting bioheat. And NYOHA has supported state measures to require ultra low sulfur heating oil and city measures to eliminate number 6 heating oil, as well as phase out and significantly reduce the sulfur levels of number 4 heating oil.

New York Oil Heating Association, Inc.

Established 1939

Supporters of:
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National Assn for Oilheat Research & Education
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Petroleum Marketers Association of America



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Today, we are proud to say that three years after the B2 fuel standard was implemented, bioheat has been a great success. Heating oil in New York City is already, by far, the cleanest heating oil sold anywhere in the United States significantly contributing to the City's 80 by 50 emissions reductions plans.

In addition to improving air quality and encouraging energy independence, bioheat has enhanced green job creation, and supported local family owned businesses and labor.

Building owners have found that it is not only safe and seamless, but actually improves fuel efficiency; helps clean and preserve building equipment; and reduces the need for periodic heating system maintenance. In addition, biodiesel is widely available and currently costs the same or less than traditional heating oil, making it a long-term, cost-efficient option.

Our experience has shown that B5 is working very well in building equipment. However, we feel that it is important to more thoroughly analyze the implementation of higher biofuel blends. Heating oil infrastructure in buildings varies by type and age, and we would want to ensure that compatibility with higher blends could work in a seamless fashion. This takes time and resources. For this reason, we feel that Intro 642 would be best amended to require a B5 fuel standard starting in 2016, and then study the feasibility of going as high as B20 in the near future.

Our goal is to continue to increase the blends as the collective group of stakeholders deems it safe and reliable. NYOHA's goal is to be at B20 biodiesel and we wish to work with the Council on eventually reaching that goal in sensible and well-monitored steps so as to ensure a smooth transition to this powerful more renewable fuel.

New York Oil Heating Association, Inc.

Established 1939

Supporters of:
Empire State Energy Association
National Assn for Oilheat Research & Education
National Biodiesel Board
National Oilheat Research Alliance
Petroleum Marketers Association of America



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We at NYOHA feel that there is more that we can do to make biodiesel into a standard, everyday part of New Yorkers' lives through clean transportation and that is why we are also supportive of Intro 880 which seeks to set a fuel standard of B5 ultra low sulfur diesel for all city-owned, operated or contracted schools buses.

Currently the vast majority of the school buses are powered by heavy-duty diesel engines and consume conventional diesel fuel. Numerous school districts across the country have realized the health and environmental benefits of biodiesel blends and made the switch.

I would like to conclude by saying that this an exciting time for the heating oil and biodiesel industry, which, like many industries, is seeing the benefits of new developments and investments that will create a more sustainable, cleaner fuel.

Thank you for your time today.

Lisa DiCaprio, October 26, 2015

Revised testimony in support of Int. 880-2015, a Local Law to amend the administrative code of the city of New York, in relation to the use of B-5 biodiesel fuel in city-owned, operated or contracted school buses.

My name is Lisa DiCaprio. I am a professor of Social Sciences at New York University where I teach courses on sustainability.

I am testifying in support of Int. 880-2015 introduced by Council Member Helen Rosenthal which “requires that diesel fuel-powered school buses use ultra-low sulfur diesel fuel that contains five percent biodiesel.” This law is required because the 9,500 school buses contracted by the NYC Department of Education were exempted from the 2013 law mandating a minimum of B5 for NYC-owned and operated diesel vehicles.

I support the proposed legislation for the following reasons:

- The new law will not require modifications for vehicles built after 1993.
- The new mandate will reduce air pollution and greenhouse gas emissions and improve air quality within NYC school buses.
- As transportation is the second largest source of greenhouse gas emissions in NYC, this law will contribute to meeting NYC’s new goal of reducing these emissions by 80% by 2050.
- Int. 880-2015 represents an important expansion in the use of a biodiesel blend for NYC vehicles which began with a 2005 law requiring a B5 biodiesel blend in NYC Parks Departments vehicles. This initiative’s success inspired the 2013 law that was applied to the 9,000 NYC-owned and operated diesel vehicles. (See: <http://www.nyc.gov/html/dot/html/motorist/alternativefuel.shtml#standard>)
- An increasing number of cities and school districts in the U.S. are mandating biodiesel in their diesel school buses. (See, for example, <http://www.biodiesel.org/using-biodiesel/market-segments/school-buses>)
- With regard to land use and food production, soybeans are a multi-purpose crop and oil can be extracted from a soybean while leaving the rest of the soybean available for other purposes.

I also recommend consideration of these three questions:

1. The 2013 biodiesel law requires the use of a B5 biodiesel blend as of July 1, 2014, the use of a B20 blend from April to November as of July 1, 2016, and a pilot program to be launched prior to December 1, 2016 to study the feasibility of using a B20 blend throughout the year. Will a separate year-round B20 blend feasibility study be carried out for NYC diesel school buses? (For an update on the implementation of the 2013 law and the DOT's alternative fuels program, see: <http://www.nyc.gov/html/dot/html/motorist/alternativefuel.shtml>)
2. When the diesel school buses that are owned by the companies with which the City has contracts reach the end of their useful life, would it be possible to recommend or mandate their replacement by electric vehicles? Charging stations would only be required at the depots for school buses.
3. According to the Union of Concerned Scientists, "Biodiesel made from waste materials or used cooking oil can cut global warming pollution by 80 to 90 percent relative to conventional diesel fuel." However, as with many raw materials, the sourcing of the oil used in biodiesel is important. See: <http://www.ucsusa.org/clean-vehicles/clean-fuels/biodiesel-basics#.Vi501G5vnXs> Would it be possible to consider mandating procurement policies that would require the biodiesel used in NYC school buses to be obtained from recycled restaurant oil and/or soybeans grown in the Midwest and to preclude biodiesel obtained from sources such as palm oil from Indonesia, which is a source of deforestation?

In conclusion, the proposed legislation affirms the crucial role of government mandates in expanding the use of alternative fuels for vehicles in NYC as a way to reduce our carbon footprint.

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card



I intend to appear and speak on Int. No. _____ Res. No. _____
 in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Ling Tsou

Address: _____

I represent: United for Action

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card



I intend to appear and speak on Int. No. 642 Res. No. _____
 in favor in opposition

Date: 10/26/15

(PLEASE PRINT)

Name: Karen Moreau

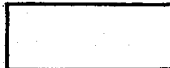
Address: _____

I represent: American Petroleum Institute

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card



I intend to appear and speak on Int. No. ⁰⁶⁴²0880 Res. No. _____
 in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Ya-Ting Liu

Address: _____

I represent: NY League of Conservation Voters

Address: 30 Broad St 30th Fl NY NY 10004

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

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I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

Name: BRENT BAKER (PLEASE PRINT)

Address: 531 BARRETTO ST, BRONX

I represent: TRI-STATE BIODIESEL

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

[]

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 10/26/15

Name: Keith Kerman (PLEASE PRINT)

Address: _____

I represent: Dep-Comm. and Chief Fleet Officer for

Address: Dept. of Citywide Administrative Services

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

[]

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 10/26/15

Name: Cathy Pusion (PLEASE PRINT)

Address: _____

I represent: Senior Policy Advisor on Energy

Address: Mayor's Office of Sustainability

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Kerth I Kerman

Address: 1 Centre Street, NY, NY

I represent: DCAS Deputy Commissioner / City

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: KAREN MOREAU / JAY PATRICK

Address: _____

I represent: American Petro Institute

Address: Albany NY

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 880 Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Scott Hedderich

Address: scott.hedderich@regi.com

I represent: National Biodiesel Board Renewable Energy Group

Address: _____

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Anthony J. Fiore

Address: _____

I represent: Mayor's office of Sustainability

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 642,880 Res. No. _____

in favor in opposition

Date: 10-26-15

(PLEASE PRINT)

Name: DANIEL GIANTFALLA

Address: 500 KINGS LANE AVE, BROOKLYN NY

I represent: UNITED METRO ENERGY

Address: SAME AS ABOVE

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Anthony Pastore

Address: _____

I represent: Mayor's office of Life Style Sustainability

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 880 Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Shelby Neal

Address: sneal@biodiesel.org

I represent: National Biodiesel Board

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 642+880 Res. No. _____

in favor in opposition

Date: OCT 26, 2015

(PLEASE PRINT)

Name: Rocco Lacertosa

Address: _____

I represent: New York Oil Heating Association

Address: New York, NY

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 642+880 Res. No. _____

in favor in opposition

Date: OCT 26, 2015

(PLEASE PRINT)

Name: DAN GIANFALLA

Address: _____

I represent: United Metro Energy Corp

Address: Brooklyn, NY

Please complete this card and return to the Sergeant-at-Arms