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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON ENVIRONMENTAL PROTECTION

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B E F O R E:
DONOVAN J. RICHARDS
Chairperson

COUNCIL MEMBERS:
COSTA G. CONSTANTINIDES
ERIC A. ULRICH
RORY I. LANCMAN
STEPHEN T. LEVIN

[gavel]

CHAIRPERSON RICHARDS: Okay we are ready to begin. Okay good afternoon. I am Donovan Richards, Chair of the Committee on Environmental Protection and today the committee will hear Intros number 54 and number 451 which will require the use of biodiesel in the New York City ferry fleet and in the Department of Environmental Protection's marine craft. Transportation fuel oils are a major source of air pollution in New York City. Using biodiesel in place of petroleum diesel for marine transportation can have a positive impact on the environment and public health, and can provide safety benefits in marine applications as it is less toxic and bio, and more biodegradable than petroleum diesel. In the event of an accidental discharge the adverse impact that a biodiesel spill would have on the marine environment is relatively less than that of petroleum diesel. Biodiesel is clean, cleaner burning than conventional petroleum diesel, an important distinction in a city where improving air quality is a challenge. Petroleum diesel exhaust is a major source of air pollution and exposure to such exhausts has averse health defects on populations including increased mortality rates, respiratory

diseases, changes in lung function, and asthma attacks. Links have been documented between air pollution from diesel exhaust and cardiopulmonary mortality as well as lung cancer mortality, increased blood pressure, and altered electrical functioning of the heart which is particularly dangerous with preexisting coronary artery disease. Compare to use, using petroleum diesel in a diesel reduces resulting emissions of particulate matter which contributes to… and respiratory conditions, sulfates which contribute to acid rain, carbon monoxide which leads to greenhouse gasses and unburnt hydro carbons. These benefits occur in part because biodiesel contains 11 percent oxygen by weight allowing the fuel to burn more completely so fewer unburned or partially burned fuel emissions result. Emissions are reduced proportionately according to the amount of biodiesel used in the fuel bend. This legislation will also provide health benefits for the most vulnerable individuals. Everyone is impacted by poor air quality but certain groups experience more serious impacts than others due to their greater susceptibility at the same levels of air pollution. Most studies have found

greater vulnerability to air pollution and susceptible populations including but not limited to the, the elderly and our children. Of all groups that are disproportionately impacted by air pollution and have been studied the most research has involved adverse health impacts to children. With the legislation being heard today we move that much close to achieving the health benefits most desperately needed by the most vulnerable groups and individuals. Today's hearing is another step towards a more sustainable future. Now let's hear from council member Costa Constantinides on his bill regarding biodiesel use in the city ferry fleet.

COUNCIL MEMBER COSTANTINIDES: Thank you Chairman Richards. And as always thank you for your great leadership on making our city more green, more sustainable, and more livable for all. So thank you. Good afternoon. My name is Cost Constantinides. In achieving 80 by 50 the, the city council set our city on a bold new path and consequently we must be mindful of our duty to encourage the use of sustainable energy sources in both the public and private sectors. New York City's air still falls short of the clean air act standard for pollution

and childhood asthma is still all to prevalent in many of our neighborhoods. In Western Queens alone number one reason children miss school is, is asthma under 14. And they miss between 10 and 30 days of school a year. That's why striving for greater fuel efficiency and sustainability will have positive repercussions for all of our health and wellbeing. The council's already passed legislation requiring that a certain percentage of bio diesel fuel be used in city vehicles and city buildings. EPA studies have shown that bio-fuels have a significantly smaller carbon footprint than petroleum based fuels. Additionally the US Department of Energy studies show that there is an inverse relationship between biodiesel percentages by volume and pollutants. In other words more biodiesel usage results in fewer pollutants entering our atmosphere. Currently our, only our surface vehicles are required to use biodiesel blends. This bill would expand that requirement to include city owned and operated ferries. Being that the Staten Island ferry fleet alone burns up to 70 thousand gallons of fuel every week we're looking at that as a major area for emissions reductions that has not yet been touched.

Intro 54 would mandate that these ferries switch to a B5 biodiesel blend within six months of passage and that the blend be increased to 20 percent by 2020. As DOT has already been testing B5 on the Staten Island ferry, though back in 2008, we know that this, this can be technically done. Other localities have had success using biodiesel blends in ferries. Washington state for example has used a B5 blend in their ferry fleet year around for several years. Biodiesel has also been used in ferries in Quebec, Denmark, and Australia. We have therefore a proof of concept that biodiesel can work in many different maritime conditions. The US DOE's alternative fuel data center shows that the price of biodiesel has generally kept parity relative to comparable fuels like gasoline and diesel. If we as a city wish to reach our goal of an 80 by 50 emission reduction by 2050 we, then biofuels must be a major component of how we achieve that crucial objective. Thank you.

CHAIRPERSON RICHARDS: Thank you Costa. And I just want to… I acknowledge colleagues who are here, Council Member Steve Levin has joined us and Council Member Costa's, obviously is here. I'm going

to switch some things up. Normally we allow the administration to testify first but I'm feeling in a different mood today. So we're going to hear from Roland Lewis from the Metropolitan Waterfront Alliance and we'll also hear from Shelby Neal from the National Biodiesel Board.

UNKNOWN FEMALE: Gentleman could you please raise your right hands. Do you swear or affirm to tell the truth, the whole truth, and nothing but the truth today?

CHAIRPERSON RICHARDS: You may begin.

SHELBY NEAL: Great thank you. Good morning Chairman Richards, members of the committee. I appreciate the opportunity to testify here today on Intro and Bill numbers 54 and 451, legislation to increase the use of cleaner burning biodiesel fuel. My name is Shelby Neal… Director of State Governmental Affairs for the National Biodiesel Board. NBB is the national trade association representing the nation's bio-diesel and renewable hydrocarbon diesel producers. The association serves as the coordinating body for research lobbying and marketing. We have about a 17 million dollar annual budget, about 14 million of which is devoted to

research and education which is, is fairly novel. Most trade associations are primarily devoted to lobbying. Biodiesel is a diesel replacement fuel that's been designated an advanced fuel by the US EPA. That means all forms of biodiesel produce at least a 50 percent or greater advantage in terms of greenhouse reduction relative to petroleum based diesel. The fuel is made of byproducts and co-products of other industries such as agricultural oils, fats, waste greases. Biodiesel is refined to meet a very specific… international fuel specification. Currently there are more than 150 biodiesel producers across the country with a production capacity in excess of 2.5 billion gallons. The last two years have been record years for us. We produced 1.4, 1.4 billion gallons each of the last two years from sustainable US drive domestic sources. Biodiesel's commonly marketed in a B5 concentration but is, is more and more frequently used up to B20 particularly in the upper Midwest blends are between B, B10 and B20, I would say primarily. It's, biodiesel is distributed utilizing the existing fuel distribution infrastructure. No modifications are, are necessary for its

distribution. Of course as you know New York City has been a leader in alternative fuels… specifically biodiesel for a number of years… my great pleasure to be coming here since 2006 testifying on legislation. In October off 2012 perhaps the high point was the city implemented the nation's first citywide standard for bioheating fuel. We're not aware of any significant problems or in fact any problems that have resulted from that. And even prior to implementation of that policy New York was the largest municipal user of biodiesel by a factor of at least four. With most vehicles and buildings using at least low level blends and many using high level blends even up to B100. In short New York City's been a true pioneer leading the way for others around the country and indeed even the world we get, frequently get correspondents from people around the world interested in what's happening in New York City. With regard to the specific bills today we strongly support… in support of both. The city's done an amazing job really and and making sure they see good penetration both in the on road fleet and the space heating area. So it only makes sense that the next step would be the marine sector.

And so we're strongly supportive of these efforts. And if there's anything we can do to be helpful we, we would love to do that. In conclusion again like to thank Chairman Richards for having the hearing today and Councilman Constantinides for all of his work both now and, and over the past few years. Thank you.

ROLLAND LEWIS: Good afternoon. My name is Rolland Lewis. I am the president of the Metropolitan Waterfront Alliance and alliance of over 800 different civic institutions and businesses dedicated to a energized revitalized resilient harbor for all five boroughs and New Jersey whereby state. We too strongly support the bills. I think this is a, a, a strong step forward and, and a, and a path that's already started… the use of ultra-low… diesel by the city's fleet… I see you'll be hearing from Katherine…, DOT and… have been champions. And I think this will push us all to do further and better because there is more room for improvement. It will, as gentleman said it will reduce pollution and as a testimony already deliberately will reduce pollution as we've seen on, on the land fleet already. We are, we're following in suite to other great ferry

cities. San Francisco, British Columbia, excuse me Vancouver, British Columbia, and also Washington State, the second largest ferry fleet in, in… are all using biodiesel. And I'd like to just go, get out front and talk about the issue that has come up and I, as I've talked to mariners, I also see our friends from Metro Fuel here who generously supply biodiesel for the historic boat fleet on our city… day festival where 25,000 people get out on the water every summer. That city, that, the… sponsors… There was some reticence among some of our colleagues who operate historic boats about using this. They said oh it's going to clog our engines. Some, overtime they have used it and they found that has not to be true. They did a study as you're maybe aware in, in Washington state where they uh evaluated what would happen. And only boat where they had one problem. And they've had, they, they had a remedy that they've, they, they had a purifier that they used that, that got past that problem. So I recognize that there's an issue but I think it's been dealt with and tackled by other, other cities and we should look to their, to their work on that and follow suit. Finally I would like to mention

you know as, as you all know the MWA is a, is a great proponent for more water based transit in our city from the rockaways, from Astoria, from, throughout this metropolitan area is a way for resiliency in case of the next calamity that will happen as a way of commutation for people who need to get around. We need to use our blue highway in a bigger and better way. So the city by setting this example will hopefully get the private industry to follow as they have in many, many ways. Some, some of the boats are using bio diesel and, and… because of the city's step forward. So I see a day when we are much better connected by water, by, by many many ferries running around from, from the rockaways to Coney Island, to lower Manhattan, to Astoria, up to the Sound view in the Bronx. And when those boats are on the, on the water they should be using the, the cleanest possible fuel, and I think Bio diesel is part of the solution to making that happen. So thank you very much for the opportunity to testify and happy to answer questions.

CHAIRPERSON RICHARDS: Thank you. Okay I'll start with this and I guess Shelby can you speak of the pricing on biodiesel and, and… you know

has pricing increased or has it decreased over the years or is it… level?

SHELBY NEAL: Sure Mr. Chairman I'd be happy to speak to that if I might refer to my notes. I, I anticipated this question because it's probably the most frequent question that we, we get. Everyone wants to do something for the environment as long as it's cheaper but fortunately we have been so that's a very good story for… so… So I do have proprietary data, we subscribe to three different pricing services, basically all the three major pricing services. And so the one, the one that we think covers New York Harbor the best I happen to have here. So I've been tracking the past 30 months and biodiesel's actually been cheaper 24 of those last 30 months here at the harbor, and the average is 22.4 cents less expensive than petroleum under, under that time period. So pretty significant potential savings to, to consumers. I think that the secondary question related to that is obviously there have some unique things happening in the fuel market the past couple months which related to prices, prices have come down pretty significantly and so the question is what happens to biodiesel.

And so I think what the data shows is that there is some compression in that pricing advantage but it's, it's still there. So where, where you would have seen maybe 30 or 40 cent pricing advantage over the summer when we had very high prices you know that advantage is now down between one and 10 cents typically. So there's been some compression but it's still there. So in essence when biodiesel's feed stocks which are co-products and byproducts are priced on the barrel of oil, when the barrel of oil comes down those feed stocks come down typically in tandem or, or nearly in tandem.

CHAIRPERSON RICHARDS: Can you speak of I guess the different blends and, and how, how successful are the different blends? So five, 20 in the winter in particular because I know that, that seems to be a big concern you know from different people we speak to you know over time. So can you speak to…

SHELBY NEAL: Sure.

CHAIRPERSON RICHARDS: …how is it working out in the winter?

SHELBY NEAL: Well I think… to point and understand that all fuel has to be managed for

different climates, so there's, there's different petroleum based fuel used in, in the winter and some are… and there's additives that typically are used even for petroleum based fuels. Having said that the cold flow properties of biodiesel are not quite as good as those of petroleum so there's a little bit of perhaps slightly different management that occurs. It's the same process but since biodiesel cold flow properties are not quite as good maybe there's a little bit more additization that occurs in terms of, of that, those level blends. So it's all of the same process, thought process, management process, maybe just a little bit more additization that occurs with biodiesel. So if you look at specific blends I'd be surprised if you heard concern about B5. We have data that suggests that, that the cold flow properties would be… precisely the same as, as petroleum. So in other words there's, there's simply not enough difference between cold flow properties and biodiesel and petroleum at, at a five percent concentration to make a material difference, a measurable material difference. Now with B20 there is a measurable difference. And so typically what you would see is

some additization but clearly that, you know there's, there's a process in place for that, it's not a different process for petroleum, just maybe a little bit more additization. So we have had highly successful users of B20, even B100. So you know the winter Olympic games uses B20. Aspen, the city of Aspen uses B20. Glacier National Park uses B20. The state of Minnesota uses B10. So a lot of clearly high profile uses so that something that can be managed through. And it's not, it's not particularly challenging. It's, it's really what the petroleum industry does.

CHAIRPERSON RICHARDS: And do you… and my last question for you and I, I know Costa has questions and maybe some of my other colleagues. Do you believe that the city can utilize biodiesel in their, in the, in the city fleet, I mean in the ferry fleet and, and for the DEP vessels and, and can you expound if there, do you believe there would be difficulties in utilizing biodiesel?

SHELBY NEAL: There wouldn't be any that I would anticipate. Every… I, I wouldn't anticipate any. You know the engines are, are typically rail engines. So we have experience there. We, we know

that's good. And then cold flow is not a novel concept. We have experience there as I mentioned. There's certainly plenty of, of supply. You have Metro Fuel here which is going to be a, a very significant producer of local product using local feed stocks here in the… so, so it'd seem like everything's, all, all the boxes that one would want to check have been checked. Having said that if there were significant concerns and someone were in, in favor of some sort of preliminary pilot program to put in place a structure, a very specific management best management practices we would not oppose that. I'm not saying it's necessary but we, we would not necessarily oppose that. We'd like to bring everyone along together in a way that everyone's comfortable.

CHAIRPERSON RICHARDS: Thank you so much. And Costa has questions so…

COUNCIL MEMBER CONSTANTINIDES: Thank you Chairman Richards. So tell me about how things have changed since 2008. I mean I remember I had a phone back then that flipped open in 2008 and definitely didn't do all the stuff that this thing does but how has biodiesel changed in the last seven years that

maybe works, the technology's been upgraded in that time that we can look to the future?

SHELBY NEAL: Well thank you Councilman. Of course you've been following biodiesel for, for a number…

COUNCIL MEMBER CONSTANTINDES: Mm-hmm.

SHELBY NEAL: …of years and we appreciate that. I think there have been quite, quite a number of changes in, in biodiesel. Number one with, with pricing. Pricing has, has been as I mentioned essentially for the past two and half years… been consistently less expensive than petroleum. That, that would not have been true back in the 2007 2008 time frame. But you know there, there have been improvement like any product really. When it first comes out. I've been looking at LED light bulbs for example, replacing my whole house with LED light bulbs. Well there's no question that, you know that, that would, that would save energy and, and the quality of the lighting is very good but we're going to see improvements with people projecting, okay it's going to be cheaper, it's going to be better which is a national progress of any industry. We've continued that progress as well. Fuel quality we've,

we have some, some surveys where we've showed that fuel quality of biodiesel is actually, we're on spec more than the petroleum industry and the petroleum industry you know does an outstanding job in that respect. So in, in 07 08 timeframe that would not have been true. So we're, we're producing more consistent high quality fuel on a rates that, that parallel petroleum at, at prices that are less expensive than petroleum. So I think the story there is, is very very positive. We're seeing more high blend use. The state of Illinois uses 70, 75 percent of its diesel is used in concentrations between B10 and B20. You know think about Chicago in the winter, very cold flow sensitive type area successfully. The entire state of Minnesota uses B10 now. So we've seen you know continued advancement, to say nothing of what's happened here. Of course in the city of New York… So I think there have been a number of advances. Of course production as well. In the 2007 2008 time frame we would have been producing between four and 700 million gallons. Now we're producing over 1.4 billion gallons. Production capacity now is, is between 2.5 and 3 billion gallons. So there's been huge growth, huge efficiencies, huge quality

improvements throughout the industry and significant advances in use… [cross-talk]

COUNCIL MEMBER CONSTANTINIDES: So I guess you can…

ROLLAND LEWIS: To add of course the, probably the most important thing for the city is… technology but we have a home grown, home based biofuel provider here in, in the city of New York. And that's, that's a big 'ol deal.

COUNCIL MEMBER CONSTANTINIDES: I definitely agree. I mean, so like biodiesel, I guess you both would agree then that biofuel is not a boutique fuel, that it's really a mainstream fuel that is, is definitely going to be a, a, a part of the conversation when we talk about alternative fuels to move our city forward to do some measurements. That'll be a correct statement?

SHELBY NEAL: I would, I would agree 100 percent.

ROLLAND LEWIS: Yeah and, and I would add that on the ASTM if you look at the, the time frame you mentioned we only had one specification. Now we have specifications for B5, B6 to B20, B20 and home heating oil. So we've, we've moved up the entire

chain now… specification for exact… for everything. And ASTM international by definition means that you're accepted because those are petroleum companies, OEMs, auto manufacturers, rail industry, they all have to vote to support that.

COUNCIL MEMBER CONSTANTINIDES: So if there was a trial in 2008 that maybe didn't go quite the way they wanted it to go we're talking about a seven year difference and a lot has changed in those seven years. We shouldn't be relying on seven year old data to determine whether or not a fuel is a, one that fits the mainstream correct?

SHELBY NEAL: Correct. I would look to the Washington state study that they did about the use of, in ferries about B, B20 actually. And then the, I, I, I omitted the most important thing about that home, home base so… it's on the water. Water based transit for, and deliver of, of biofuel which I think is fantastic…

COUNCIL MEMBER CONSTANTINIDES: Great. Thank you. Well go ahead to…

ROLLAND LEWIS: Well I think we've been very candid about where as an industry have made mistakes. I think it's important to admit where

you've made mistakes. And if you don't certainly others will admit those for you. And, but I think it's also important to go back and learn from those experiences. So when, when Minnesota was mandated statewide there, there was a fuel quality issue and a limited number of circumstances. And we took that information, those, those issues that happened and we created an entire program called BQ9000 and, and we put those additional parameters, or cold flow parameters around the specification. Since that we've not had any issues. So I think it's important to admit the mistakes occurred but I think, also think it's important to go back and learn from those and, and to address those issues. And that's what we've tried to do in a very transparent way.

COUNCIL MEMBER CONSTANTINIDES: Alright thank you both.

CHAIRPERSON RICHARDS: Thank you. Thank you. Thank you both. And I just want to acknowledge we've been joined by Council Member Rory Lancman from Queens and we'll have our next panel now. We will hear from Eric Landau the Associate Commissioner for DEP, John Petito the Acting Deputy

Commissioner of DEP, And we will also hear from James DeSimone from DOT, and Nivardo Lopez DOT.

UNKNOWN FEMALE: Gentleman would you please raise your right hands. Do you swear affirm to tell the truth, the whole truth, and nothing but the truth today?

JAMES DESIMONE: One two, okay good. Good afternoon Chairman Donovan, members of the Committee on Environmental Protection. My name is James DeSimone. I'm Chief Operating Officer of the New York City Department of Transportation Staten Island Ferry Division. Joining me here today is Nivardo Lorpez, Lopez excuse me DOT's Director of Legislative Affairs. We are here today on behalf of Commissioner Trachtenberg who unfortunately could not be with us today due to a prior commitment. However she did want us to express her appreciation for your inviting us to this hearing and giving us the opportunity to comment on Intro 54. For over a century now the city of New York has owned and operated the Staten Island ferry. For the year just ended our fleet of eight ferries serviced almost 22 million passengers with an average of 109 passenger trips each and every weekday between the St. George

ferry terminal in Staten Island and the White Hall ferry terminal in lower Manhattan making the ferry our nation's largest passenger only ferry system. As such it is a critical mass transit link between Staten Island and Manhattan and it is also one of the city's most visited tourist attractions. DOT takes its responsibilities in so far as operating the Staten Island ferry very seriously and is fully committed to providing safe on time and efficient ferry service. The agency has been recognized as an industry leader in safety management by the National Transportation Safety Board, the United States Coast Guard, the Passenger Vessel Association and other. We were extremely proud of the fact that the ferry is the only marine operator in the United States today to a voluntarily established a safety management system modeled on the International Maritime Organization Safety Management Code and certified by the American Bureau of Shipping on behalf of the United States Coast Guard. We applaud and fully support the council's efforts in so far as emissions reduction and promoting clean, cleaner burning fuels. And we are also very proud of our own environmental stewardship and initiatives in this

regard. The Staten Island ferry today is one of the cleanest ferry systems in the nation in so far as a emissions and is also an active participant in the PVA Waters Program, a voluntary best green practices regime sponsored by the passenger vessel association. This program encourages best practices and so far as office operations, power sources, fuel type, and consumption, engine maintenance and emissions, vessel design and construction, water conservation, environmental training and the like. Over 10 years ago the Staten Island ferry entered into a partnership with the port authority of New York and New Jersey to reduce the emissions in New York Harbor. Under this partnership the Port Authority funded emissions upgrades for the Staten Island ferry fleet in exchange for emissions credits achieved by the upgrades in order to utilize them in its New York Harbor dredging project. Specifically pursuant to this arrangement the emissions control technology was installed on all eight passenger ferries. The installation of this equipment resulted in the reduction of emissions of Nitrogen Oxide, sulfur oxide, and particulate which led to all of the large ferries meeting EPA tier two requirements

and the two smaller ferries now meeting federal EPA tier three requirements. In addition to these initiatives DOT on its own contracted for the design, manufacture, and installation of diesel oxidation catalyst for all of the large ferries further reducing emissions. We've also been at the forefront of trialing potentially greener fuels including ultra-low sulfur diesel, biodiesel B5, and liquefied natural gas. To this end the Staten Island ferry began burning ultra-low sulfur diesel in 2007 well in advance of any regulatory requirement. As for B5, In 2008 we trialed an ultra-low sulfur with a five percent bio blend. On the LNG front in 2012 the Staten Island ferry was awarded a federal grant to study and trial the use of LNG as a marine fuel. Given the clean burning properties of LNG and the perceived benefits including significant emissions reduction, lower fuel cost, reduced lifecycle maintenance and cost, and the elimination of water pollution this is a fuel that warrants our, our consideration. We have a bid proposal on the street currently with proposals due at the end of January. At that time we will make a determination on how we proceed with the LNG project. In 2008 and again in

2013 we engage the services of energy consultants to review our operational tempo and fuel consumption, collect data, and identify ways in which we might be able to conserve fuel. As for our facilities our, the terminal in lower Manhattan and the ferry maintenance facility in Staten Island are both equipped with photovoltaic installations that provide a certain amount of solar power. Our terminal in St. George is also fitted with a living roof. And we are now looking into transitioning the facilities and the vessels to LED lighting. The operational problems we experienced in the trialing in B5 were a major safety concern to us paramount of which is the potential for a main engine shut down. Even when considering how we might mitigate these problems such as additional personnel to maintain purifiers and change filters while underway we found ourselves in an untenable situation. Cleaning and maintaining purifiers, injectors, and changing filters all the while maneuvering every 20 minutes creates an unacceptable risk in and of itself. In general there are a variety of problems related to the use of bio diesel in the marine application. Cold weather use is a major concern given the less

than favorable flow properties compared to conventional diesel. The hydrophilic nature of the biodiesel allows for a significant concentrations of entrained water which is incompatible with marine systems, can affect fuel storage stability and may cause damage to engines and fuel systems. These specifications for marine fuel is prescribed in the code of federal regulations, however there is no recognized specification for a marine grade of biodiesel. This lack of specification is concern to engine manufactures is biodiesel has the potential depending on its makeup of dissolving certain non-metallic materials in the engine fuel systems such as seals, rubber hoses, and gaskets and interacting with certain metallic materials such as copper and brass. Biodiesel contains less energy than diesel and therefore the use of such fuel increases fuel consumption. Biodiesel burns at a higher temperature than diesel and therefore the emission of nitrogen oxide can actually increase. Finally biodiesel can degrade over time forming contaminates. If biodiesel is stored for an extended period of time close monitoring would be required to see if it is, if it remains within specifications potentially leading to

a logistical problem with our need to store minimum quantities on site to maintain service, to store fuel on the vessels when they enter, and to store fuel on the vessels when they enter non-operating maintenance periods. The use of bio diesel in the maritime industry was and continues to be very limited. In fact according to a report by the US Department of Transportation Maritime Administration biodiesel used for the marine application has so far involved the use of custom specifications and blending procedures. Further the report states that the only blends approved by the American society of testing and materials are ASTMD97509 up to a five percent biofuel and ASTM764709 six to 20 percent biofuel which are accepted for government purchase for on road use. However neither are approved for, as, for use as a marine fuel. It is also interesting that the report indicates that the United States Navy and the United States Coast Guard have zero tolerance for biodiesel fuels that they procure for their ships and that the United Kingdom's Royal Navy has banned the use of biodiesel in ship systems. As indicated earlier in my testimony the Staten Island ferry trialed B5 in 08. The results were alarming in

that we experienced significant clogging in fuel oil purifiers, injectors, and fuel filters and frequent fuel oil pump seal failures. The clogging of fuel oil purifiers was so persistent that it necessitated purifier cleaning four times per day versus the norm of once every other day. There is also a cost factor involved. Although DOT's ferry engineering unit had already determined that the use of B5 is unsuitable for the Staten Island ferry vessels the project was actually terminated by the office of management and budget because of the cost differential between barge delivery of ultra-low sulfur diesel and ultra-low sulfur B5. These costs however did not factor in the increased maintenance cost associated with using B5 which would have included labor, parts, and material. The Maritime industry is under stringent tier and emissions requirements during a phased in period that has already begun. The design of the next class of ferry boats for the Staten Island ferry is now underway and these vessels will be delivered beginning 2019 must meet federal EPA tier four requirements. At that time vessel operators will have to prove that the emissions from their vessels are within specified parameters. To achieve

these mandates after treatment technology is currently being designed and tested and the quality of fuel used will be critical for the emission certification to be maintained. Marine engine vendors we have spoken to have expressed concern that the use of biodiesel… additives will compromise the after treatment technology that is coming down the line and could jeopardize ongoing certification mandated by federal law. Finally although a number of marine engine vendors indicate that their equipment is suitable for use with varying blends of biodiesel assuming the fuel oil specifications are exactly what the original equipment vendor has prescribed none of these vendors is willing to warrant any damage that might resolve from the use of biodiesel. While we appreciate the goals of Intro 54 based on our operational experience, the problems encountered, and related safety concerns we cannot support the proposed legislation at this time. It is our opinion that the federal EPA tier requirements along, along with the mandated use of ultra-low sulfur diesel will address the committee's goal of reducing emissions in a technical manner that will not compromise operational safety. Thank you

Chairman Donovan and the members of the committee. We will be happy to answer any questions you have either at this time or when the panel is through testifying. Thank you.

JOHN PETITO: Good afternoon Chairman Richards and members of the committee. My name is John Petito Acting Deputy Commissioner of the Bureau of Wastewater Treatment for the City of New York Department of Environmental Protection. I am joined today by Associate Commissioner Eric Landau of the Bureau of Public Affairs, Kevin Burns, Chief of, of the Bureau of Wastewater Treatment Marine Operations and Maintenance Section, Gia Maud [sp?] Wastewater Treatment Senior Port Engineer and other DEP staff. Thank you for the opportunity to testify on Introduction 451. As you know DEP has overall responsibility for the city's water supply and sewer system including providing drinking water to all New Yorkers, maintaining water pressure to the fire hydrants, managing storm water, and collecting and treating wastewater. DEP operates 14 wastewater treatment plants located throughout the city that clean and disinfect more than one billion gallons of wastewater to clean, to federal clean water act

standards every day. At the plants the wastewater undergoes five major physical and biological processes that closely duplicate how water is purified in nature. One of the byproducts of this processes is sludge which is transported by large vessels that many people see traversing the harbor and east river daily to the dewatering facilities where it is put through centrifuges which remove much of the remaining water. Currently the majority of the resulting material is landfilled though we continue to seek sustainable cost effective uses such as land application ideally used as fertilizer. Sludge vessels have been a part of the city's wastewater treatment system since the late 1930s and the Federal Work Projects Administration funded the first three motorized sludge vessels. Today DEP operates a fleet of sludge vessels that transport nearly 1.2 billion gallons of sludge each year. In 2009 DEP was awarded 53 million dollars, a 53 million dollar grant through the American recovery and reinvestment era. One of the largest era grants in the, in the country. This finances 50 percent of the cost for the three new vessels, the Hunts Point, the Port Richmond, and the Rockaway motor vessels

which were joined, which joined the North River and Red Hook motor vessels. These vessels operate seven days a week and each has a six person crew including a captain, a chief engineer, assistant engineer, a mate, and two mariners. The new ships are 290 feet long, 70 feet wide, and have the capacity to transport 140 thousand cubic feet of sludge or roughly one million gallons. They weigh 2,872 tons and are designed to travel at 10 knots or approximately 11.5 miles per hour. On a typical week the five sludge vessels make a total of 26 round trips and visit eight wastewater treatment plants. The three new ships are equipped with the latest marine technology, have a greater cargo capacity for redundancy, and more versatility than any other models including shallow draft which allows them to navigate under the Pulaski Bridge and into Whale Creek where they can doc it directly adjacent to the Newtown Creek wastewater treatment plant. This versatility has allowed DEP to dismantle an 800 thousand gallon storage tank along the shore of the east river in Greenpoint, Brooklyn and the land will be used to develop new affordable housing and expand the Newtown Barge Park. In addition to the five

sludge vessels DEP operates four smaller skimmer vessels, four shoreline survey vessels, and one harbor survey vessel. All of our vessels use number two ultra-low sulfur diesel fuel, USD, ULDS, SD, ULSD. Intro 451 requires that from July 2015 until January 2018 a US, a ULSD fuel blend with at least five percent biodiesel by volume, B5, be used in diesel fuel powered marine craft owned or operated by DEP. Intro 451 further requires that after January 1st 2018 ULSD fuel blend with at least 20 percent biodiesel by volume, B20, be used in diesel fuel powered marine craft owned and operated by DEP. DEP is concerned about the significant impacts this legislation will have, have on the agency and our vessels. As mentioned all of our vessels use ultra-low sulfur diesel fuel meeting stringent EPA tier two emission standards. As you have heard from the Department of Transportation the required use of biodiesel, either B5 or B20 prevents a, presents a host of issues regarding operational impacts, engine modifications, fuel availability, and storage that make the use of biodiesel in marine engines infeasible. Though DEP has no experience with biodiesel and marine vessels research and

consultation with the United States Department of Transportation Maritime Administration or MARAD in preparation for this hearing brought us to the conclusion that the required use of currently available biofuels in our vessels would be premature. And that continuing research by federal, by the federal government will result in a standard for renewable, renewable fuels that all marine operators will be able to adopt. MARAD research staff expressed interest in working with New York City on piloting the use of these improved renewable fuels. A 2010 MARAD report echoes the Department of Transportation's experience with B5. MARAD is working in conjunction with the United States Navy, the Department of Defense, the National Ocean, Oceanic and Atmospheric Administration, the Department of Energy, and the Department of Agriculture to develop renewable fuels for marine use. The result of this research reported in a complete shift away from biodiesel manufactured from waste vegetable oil to other feed stocks such as sugar and algae. The 2013 report on the, on the result of the trials with a sugar based renewable fuel was much more promising. From this report I

will read a, I will read a brief, a brief, a brief paragraph. This study compares the operational performance differences in a test vessel's use of ULSD versus a 6733 blend of ULSD and amorous renewable diesel, ARD, which is derived from sugar. No significant differences were found between the test vessel's use of neat unblended ULSD and a blend in terms of engine performance, fuel economy, air emissions, engine vibration, underwater radiated noise, and the effect on the engine itself. The test also found that after seven months of storage of blended fuel at the test location there was no appreciable change in fuel composition or biological contamination. The testing successfully demonstrated all facets of drop in fuel performance from fuel husbandry, loading, transferring, and supply to the engine to comparable exhaust emission performance with no adverse equipment vibration or underwater noise impact. A key term in this context is drop in diesel which refers to the ability to use blended renewable fuel in place of ULSD without the need for engine or equipment modifications or cleaning of barges normally, normally carrying USLD which is necessary before on-loading biodiesel. All federal

agencies use American Society for testing and material standards and US Environmental Protection Agency promulgates fuel standards. EPA has not yet issued a standard for renewable marine fuels though the federal government is hard at work developing one. Until, until then as reported by DEP engine manufacturers will not warrant damage to the engines caused by biodiesel. Moreover MARAD's research shows that this, these alternative renewables show a 10 percent reduction in nitrous oxide emissions which is NOx. As you know elevated NOx emission is a continuing concern with biodiesel. In short the types of fuel MARAD is studying appear to burn cleaner than biodiesel. It is also worth noting that because biodiesel fuel is incompatible with some marine engines including those of our three new sludge vessels acquired for 106 million dollars it would make them obsolete. DEP makes every effort to reduce greenhouse gasses, emissions, and is willing to evaluate the feasibility of further reducing emissions by using biodiesel of appropriate blends in all stationary and mobile combustible sources beyond what is already required by local law. Because ULSD is as a marine fuel is so clean burning

it represents only about one percent of DEP's annual carbon emissions. And switching to B20 would only result in a one-thousandth percent improvement in DEP's carbon footprint. That's .001 percent. We have been working aggressively towards achieving a 30 percent reduction in New York City government green, greenhouse gas emissions by 2017 relative to the 2006 baseline inventory. And we are seeking new ways to help put, put the city on path to 80 percent greenhouse gas reductions by 2050. From 20, from 2006 to 2014 DEP has reduced its carbon emissions by approximately 11 percent. Major emission reductions have been achieved through a decreased carbon intensity of the city's electrical supply, increased capture of methane from landfills and wastewater treatment plants, and reduced steam and fuel oil for both buildings and, buildings and transportation. Further we have allocated 877 million dollars for energy and greenhouse gas related projects that will help us to reduce our carbon emissions by 33 percent by 2020 from 2006. Initiatives include upgrading the digester gas systems in our wastewater treatment facilities to capture and beneficially use the anaerobic digester gas that is produced during the

treatment process. The anaerobic digester gas consists most, mostly of methane that may be used as a renewable fuel source to generate electricity and or thermal heat. Currently wasted anaerobic digested gas emissions account for almost 30 percent of DEPs total carbon emissions. DEP is also pursuing opportunities to increase energy efficiency and conservation while developing clean energy generation in our waste, our water and wastewater treatment facilities via cone generation, hydro, and solar power as well as reducing energy through water demand management and green infrastructure. Expanding on these efforts by including our marine vessels might further enhance our greenhouse gas reduction potential but we believe this step should be taken at the appropriate time in a cost effective way that preserves the continuity of our operations. Using biodiesel fuel in our marine fleet now would present all of the operational problems cited by DOT without the desired environmental benefit this committee hopes to achieve. We look forward to working with the committee to find workable solutions to further reduce greenhouse gas emissions and we thank you for the opportunity to testify

today. We will be happy to address any of your questions.

CHAIRPERSON RICHARDS: Okay we're going to go to my colleague Steve Levin because he has the lead.

COUNCIL MEMBER LEVIN: Thank you Mr. Chairman. I want to thank DEP and DOT for your testimony. Just have a couple of questions. First for DOT how much fuel does the, does the Staten Island ferry use either monthly or annually, whatever measure you use, what's the, what's, how much, how much fuel are, is, are your, are your boats using?

JAMES DESIMONE: We burn about four and a half million gallons a year.

COUNCIL MEMBER LEVIN: Four and a half million gallons a year, okay. And what's the cost in fuel that DEP has to come up with for acquisition of that fuel?

JAMES DESIMONE: DO…

COUNCIL MEMBER LEVIN: How much do you, yeah how much do you pay for it?

JAMES DESIMONE: It varies. I mean we get it… the cost is you know quoted weekly. We go

through a DCAS contract and prior to this most recent downturn we were projecting that the annual cost for fuel for the Staten Island ferry was going to be about 15 million dollars. Of course that's dropped precipitously in the last several months.

COUNCIL MEMBER LEVIN: Okay. Are there any examples that either you, DOT, or DEP is aware of, of, of the use of B5 or B20 in maritime application anywhere in the world? Is it, I mean is, is that, is that happening anywhere? I mean I, the, the, the previous panel mentioned obviously states and, and other large jurisdictions. But is there any, is there any application of maritime use anywhere?

JAMES DESIMONE: Generally in the commercial maritime industry when it comes to ships, tugs, barges, passenger liners and the like there is no biofuel being used in fact because of this issue of no standard. However you know as was mentioned here, and I happen to be very close with the people at Washington State ferry, they are burning B5 and they of course when they first experimented they has similar problems as we did. One of the primary differences between the Washington State ferry system and the Staten Island ferry is the manner in

which they handle their fuel. Washington state gets their fuel deliveries for their smaller vessels by truck and their larger vessels actually go to the various facilities. So they have a very very concise standardized fuel supply that is not sitting around and what not which is quite different than what we do. We have fuel delivered by barge, it is transferred into two barges that are, are more that St. George and Staten Island and we fuel from those. So just, just that alone having the quality of the fuel for Washington state is essentially as the MARAD report indicates most marine operators who have used biodiesel, it's a custom blend. It's something that has to be blended specifically for them. And I'll give you just an example, this just came in on Thursday January 8th from the Deputy Fleet Coordinator with the Department of Transportation, city Department of Transportation. It said; To all, It has recently come to the attention of Fleet Services that due to a lack of proper regulation the biodiesel fuel from the city pumps is above both the expected concentration and the concentration that the manufacturer supports for our sprinter vans. A number of vans are currently out of service and

potentially face having warranties voided as a result of using this fuel in compliance with the newly passed law. In light of this situation however all WEX fuel cards for sprinters have been reactivated and should be this, in bold, the soul means of refueling these vehicles for the New York, for the foreseeable future. Under no circumstances should these vehicles be fueled at city owned fuel stations until further notice. This issue applies to all city fueling facilities, not just DOT. If any card issues arise please contact me or your WEX Liaison. You know this is our concern. Alright, and I understand you know I take great pride in everything that State Island ferry has done. We, we have not been regulated into anything that I stated to you; all of our emissions initiatives, trialing B5, installation of DOC's LNG. Everything we've done has been at our own volition to try and improve the situation. So it's not like I disagree with, or the agency anything that's… [cross-talk]

COUNCIL MEMBER LEVIN: Sure.

JAMES DESIMONE: …being proposed here. Our concern is something like this. If this were to

happen the Staten Island ferry would be shut down. We cannot pull over to the side of the road okay.

COUNCIL MEMBER LEVIN: Mm-hmm.

JAMES DESIMONE: So this just happened last week with the city's fleet and the supply of biofuel.

COUNCIL MEMBER LEVIN: This is because there's, too much, a higher, higher concentration of…

JAMES DESIMONE: It doesn't go into what the concentration is. All it says is that… is above the expected concentration and the concentration that the manufacturer supports for our sprinter vans.

COUNCIL MEMBER LEVIN: Mm-hmm.

JAMES DESIMONE: Right? So that's really, that is the issue with us is that, and I would, I would certainly agree with my colleagues here at DOP, D…

COUNCIL MEMBER LEVIN: DEP.

JAMES DESIMONE: DEP, excuse me. You know I, I mean, I, we're certainly willing to trial anything and I realize eight years is a long time but…

COUNCIL MEMBER LEVIN: Yeah.

JAMES DESIMONE: …as I said talking to my colleagues at Washington state ferries they're not… in spite of what might be out there the B20 is a major obstacle because of the tier requirements that we're facing. We've been point blank told by our engine vendor do not even contemplate something like that with the tier four.

COUNCIL MEMBER LEVIN: Uh-huh.

JAMES DESIMONE: Okay? So what's happening right now is the United States has…

COUNCIL MEMBER LEVIN: Sorry tier four being B20 is that right?

JAMES DESIMONE: No no no…

COUNCIL MEMBER LEVIN: Oh.

JAMES DESIMONE: …this is the emissions. In other words…

COUNCIL MEMBER LEVIN: Oh emissions okay.

JAMES DESIMONE: So our new ferries which will be delivered in, starting in 19 they will be required to meet federal EPA… [cross-talk]

COUNCIL MEMBER LEVIN: EPA, I see, I see, okay.

JAMES DESIMONE: So they're going to have to have after treatment systems put on.

COUNCIL MEMBER LEVIN: Uh-huh.

JAMES DESIMONE: Right? And we're going to have to certify at that time that we're within the emissions requirements.

COUNCIL MEMBER LEVIN: So your, so your engine vendor is saying that they, they, they're not going to warranty a federal EPA mandated…

JAMES DESIMONE: Well once…

COUNCIL MEMBER LEVIN: …system?

JAMES DESIMONE: …once the vessel's delivered then it's up to the operator to ensure that the fuel and the, and the operation of the vessel is compliant. So you know and Washington state has the same concerns with the B20 alright.

COUNCIL MEMBER LEVIN: Mm-hmm.

JAMES DESIMONE: So you know when you look at all of this as I said we're not adverse to doing anything we have to to try and improve the emissions on the ferries but there are a lot of issues here that are not quite fleshed out yet in this subject.

COUNCIL MEMBER LEVIN: In, in Washington have they, have they had instances where they've had

to take their, their fleet offline or not, you know because of issues with the B20?

JAMES DESIMONE: No they have not, the B20 is not what they're burning. They, down the road they're supposed to and they have the concerns… [cross-talk]

COUNCIL MEMBER LEVIN: …or B5.

JAMES DESIMONE: …with the tier four.

COUNCIL MEMBER LEVIN: Okay.

JAMES DESIMONE: The B5 is what they're… [cross-talk]

COUNCIL MEMBER LEVIN: Have they ever had the, because of B5 had to take… [cross-talk]

JAMES DESIMONE: No because they… [cross-talk]

COUNCIL MEMBER LEVIN: …their, their fleet offline?

JAMES DESIMONE: …have a very local and well defined specification.

COUNCIL MEMBER LEVIN: Uh-huh.

JAMES DESIMONE: And because of the delivery methods that's being brought in by… [cross-talk]

COUNCIL MEMBER LEVIN: So a lot has to do with the delivery method… okay.

JAMES DESIMONE: Absolutely versus sitting in a barge in the, in the harbor here during the cold winter and whatnot and depending on the turnover of the fuel. And in addition just as I cited here I don't know… you know we get our fuel through DCAS and whatever happened here last week with the city's fuel supply, all of the sprinter vehicles are now are, are not authorized to fuel at city's fuel depots. So I'm just saying…

COUNCIL MEMBER LEVIN: Sure.

JAMES DESIMONE: …we couldn't afford to have something like that happen with Staten Island ferry. We would be shut down. We can't just pull over to the side of the road.

COUNCIL MEMBER LEVIN: And my final question is since DOT did their trial in, in 08 has, has the technology or anything substantial changed within biodiesel to, to make that trial outdated or that there's, there's new improvements that have, that have happened that would, that the… the science has addressed some of the issues that you may have

encountered back in 08 because there has been obviously this time lapse.

JAMES DESIMONE: I'm not sure that the science or the technology has improved. I think as the gentleman from the whatever it is, excuse me, Biodiesel Lobby or whatever it is…

COUNCIL MEMBER LEVIN: The Biodiesel Board, National…

JAMES DESIMONE: Board, okay.

COUNCIL MEMBER LEVIN: …Biodiesel Board.

JAMES DESIMONE: As he pointed out you know there are processes, the specifications have gotten probably quite a bit better.

COUNCIL MEMBER LEVIN: Mm-hmm.

JAMES DESIMONE: But as I said I'd just go back… this just came in on January 8th.

COUNCIL MEMBER LEVIN: Yeah I hear ya, I hear ya.

JAMES DESIMONE: You know and so, you know that, that would be my concern.

COUNCIL MEMBER LEVIN: Mm-hmm. Okay thank you very much Commissioners and thank you very much Mr. Chairman.

CHAIRPERSON RICHARDS: Thank you. Okay so DEP is not going to get off the hook so easily here. So D, so just to run through again. So you guys have tested no biodiesel blends in your vessels or anything so far?

JOHN PETITO: That's correct Mr. Chairman we've had no direct experience working with, with B5 but have relied certainly on our colleagues in government as well as hearing in the city as well as working with merit.

CHAIRPERSON RICHARDS: How similar are your, your vessels to their ferries?

JOHN PETITO: Very similar.

CHAIRPERSON RICHARDS: What's the, what's the, what's the difference, what, what does that mean, very?

JOHN PETITO: If I may Mr. Chairman if we could bring up Kevin Burns who's our…

CHAIRPERSON RICHARDS: Sure.

JOHN PETITO: chief of BWT's Marine Operations and Maintenance who can address the specific questions of our boats better than I can.

CHAIRPERSON RICHARDS: Okay.

KEVIN BURNS: Good afternoon. I would say just the type of engine that we use, the diesel engine is very similar. The size of the vessel is very similar, 300 feet, uh 60 feet of beam. So it's, it's comparable. You know they carry passengers, people, we carry sludge. That's, that's the big difference but… [background comment] Yes.

CHAIRPERSON RICHARDS: So can you guys speak on a B2 blend then since you're saying five and 20 is no good. Have you guys considered a B2 blend?

JAMES DESIMONE: We haven't because we… You know at a certain point in time you start like for example our emissions retrofits, both of us are required because of the Emissions Control Area and the federal requirements we're now down to a, an ultra-low sulfur diesel. I think we're at eight parts to million which is almost next to nothing which… I'm sorry, which is next to nothing, almost next to nothing is some kind of I don't know… [cross-talk]

CHAIRPERSON RICHARDS: So why haven't you considered a B2 then?

JAMES DESIMONE: Because we are basically, we're dealing, we, we actually have improved emissions because of the use of ultra-low sulfur and the emissions technology that we're putting on the vessels. So what it, you know you try this, you ty that. We also have this liquefied natural gas project we're looking at. So you know there's a variety of things we're looking at but basically, the, right now we're under pretty stringent federal requirements for tier emissions down the road. The Emissions Control Area requirements went into effect I think in August of 2012 and there is this graduated or declining requirement for sulfur content. So right now we're, we are burning probably the lowest sulfur fuel that you could possibly get. And with the after treatment technology that's going on the ferries you know you get to a point where you know maybe we're doing, what we're doing is maybe better the way it's going versus like our Director of Ferry Maintenance, his biggest concern is that with the use of biofuels you can anticipate a higher emission of nitrogen oxide which is one of the things we're trying to reduce.

CHAIRPERSON RICHARDS: DEP?

JOHN PETITO: Again I, you know as we stated in our testimony in consultation with US Maritime Administration we're waiting to sort of see what their continued analysis results in in terms of the best form of renewable fuel as they have been moving away from biodiesel. And they've expressed interest in continuing to work with us and us in working with you in determining the best renewable fuel to meet the goals of the legislation.

CHAIRPERSON RICHARDS: Let me ask you a… So has DEP considered piloting for your particular vessels?

JOHN PETITO: For B2?

CHAIRPERSON RICHARDS: Mm-hmm.

JOHN PETITO: Uh we have not at this, not currently as we, again as we've been waiting…

CHAIRPERSON RICHARDS: I mean we don't have to stop it too, it can be five, two, 20…

JOHN PETITO: Well we do know that B20 would be completely incompatible with the three new vessels that we just purchased.

CHAIRPERSON RICHARDS: Okay so have you guys considered piloting on your particular vessels?

I don't want to hear DOT, DOT is their own… So what has DEP done, the Environmental Protection…

JOHN PETITO: I think we're going to have the same problems that they had…

CHAIRPERSON RICHARDS: Let's not think…

JOHN PETITO: Well okay. [cross-talk]

CHAIRPERSON RICHARDS: …piloted.

JOHN PETITO: I, I… Let's assume, alright we have 160 thousand gallon storage tank, tanks, four tanks of 40 thousand a piece that are 20 feet under the ground at Wards Island okay. So we use about 45 thousand gallons a month on our, on our ships.

CHAIRPERSON RICHARDS: Mm-hmm.

JOHN PETITO: Okay. So it's about 10 thousand every four to six weeks we get a delivery on a ship. So we're going to have maybe 100 thousand gallons of B5 B20 sitting for maybe two, three, four months in the, in the ground and that's going to have to be pumped to a, to a vessel and we're just… you know we're just very concerned that that diesel is not going to be stable after three or four months.

CHAIRPERSON RICHARDS: Alright let's get away from the B20 for a second. So let's just stay on B5.

JOHN PETITO: Okay.

CHAIRPERSON RICHARDS: Is it feasible for you to pilot a, a B5 blend for your…

JOHN PETITO: Well, well, I mean right now DEP has a fleet of trucks that use B5 okay, smaller engines, you know the, the tanks are maybe only 25 to 40 gallons. I just talked to the supervisor of mechanics, I said do you have any problems with them, with B20, especially use B20 in the summer. That's not the problem he said it's in the winter when it's cold.

CHAIRPERSON RICHARDS: Mm-hmm.

JOHN PETITO: …it turns to like a jelly like substance.

CHAIRPERSON RICHARDS: So would you use a low ultra-sulfur diesel I the winter months and then consider using a biodiesel blend in the summer months?

JOHN PETITO: Well we… [cross-talk] we use ultra-low sulfur diesel all year around.

CHAIRPERSON RICHARDS: Okay.

JOHN PETITO: That's not an issue.

CHAIRPERSON RICHARDS: But if you're saying that the winter months will cause a problem would you consider using it in the summer months? And I know that's…

JOHN PETITO: I don't know we have other, other concerns too because our tanks, our fuel tanks on the vessels, and we have 40 thousand gallons of fuel on board each vessel, they sit right in the water. Okay so I mean I know the water warms up to maybe 75 degrees in august but you know April may it's still pretty cold so that fuel is going to be you know, like the temperatures of the water that it's sitting in.

CHAIRPERSON RICHARDS: So you guys spoke of Washington state I guess having a more concise… so have you guys considered doing something different rather than leaving it on the barge then. Would you guys consider storing it obviously elsewhere?

JAMES DESIMORE: Theirs is, theirs is in the ground, ours is in the barge and the problem with the Staten Island ferry changing the fueling we don't have enough time in the day. In other words if

ferries come into St. George and between the shifts… between, we go on a half an hour schedule at 9:00 in the morning and at around 3:20 in the afternoon we start ramping up for rush hour. So between you know roughly six hours there we have time to, we're running two ferries, we have time to maintain the boats, we have time to fuel the boats, we have time to remove bilge water offshore and then down the road here obviously we'll be removing grey water and probably sewage at some point. So there's only so many hours in the day. A delivery by truck, it just, we'd never be able to get, we wouldn't be, it would have a tremendous operational impact for us to have to take delivery by truck or even sending the ferry over to some fuel facility.

CHAIRPERSON RICHARDS: Can you go back into… so you said you guys piloted the, was it B5?

JAMES DESIMORE: Yes.

CHAIRPERSON RICHARDS: Can you go through that again and you said, you said obviously that the purifiers had to be serviced… Can you just run through…

JAMES DESIMORE: Yeah that, one of the things that we're discussing here is probably

different than the on-road application. These ferries have basically medium speed higher horsepower diesel versus a truck or a car which is a high speed lower horsepower diesel. And the fuel pumps for example in a truck or a car are in the fuel tank, on the ferry and in the DEP vessels the fuel pumps are hanging off the engines and whatnot. And you have purifiers to clean the fuel. So the experience we have, we normally clean our purifiers every other day, once every other day. And what they ended up doing was having to lean them four times a day. We went through a significantly higher number of fuel filters and we also experienced fuel pump seal failures. And these are the things that are all sort of related to you know conceivably the mix of the biodiesel. I mean granted we were, we were getting normal deliveries but you know the specification can very. I keep going back to this email. I mean, and we didn't plan this thing as we were talking last week I thought oh my god I can't believe this email just came in. So the specifications are pretty, are pretty significant. And once again I go back to Washington state. They have a local custom blend for them and it works for

them. But for us we have a different fueling procedure. There are not many people that use biodiesel in New York Harbor in the Maritime Industry. So it's you know it's, it's a different ballgame. And I think the same results can be achieved with the use of ultra-low sulfur fuel after treatment technology, these diesel oxidation catalysts that we've installed. So…

CHAIRPERSON RICHARDS: So back to DEP. So are you guys going to do a pilot.

JOHN PETITO: You know one of the other concerns that we have that, that we did mention in our testimony was that the engine manufacturers will not provide any warranty work should engines have a problem as a result of using biodiesel.

CHAIRPERSON RICHARDS: And who are these people?

JOHN PETITO: Our engine manufacturers.

CHAIRPERSON RICHARDS: And, I meant and how does… so when you bid or, or when you work with these individuals how are they selected? Because how do I know that they don't have a relationship to the diesel?

JOHN PETITO: Well it's…

CHAIRPERSON RICHARDS: Of course it may not be in their interest to see biodiesel.

JOHN PETITO: These, these are main engine vendors. You know we've been the… EMD or Caterpillar they, they, all they want is the fuel burned that meets their specifications. And then when you come in and say okay we want to trial something else they'll say go ahead and do it but we're not going to warrant that.

CHAIRPERSON RICHARDS: Have we considered using other people, utilizing other…

JOHN PETITO: What, pulling the engines out and replacing the engines?

CHAIRPERSON RICHARDS: I mean have you, so what, how many companies are you dealing with?

JOHN PETITO: We, we have basically our main engines are, most of them are provided by EMD.

CHAIRPERSON RICHARDS: EMD, okay.

JOHN PETITO: And Caterpillar are our generators. So it's not… like that's what we're talking about is that EMD and Caterpillar, they're the ones that lay out the specifications of the fuel you need to burn to warrant the engine. And you know we've asked and we've, we've had actually

discussions with EMD recently because the new ferries will be tier four and asking about this, this particular legislation. You know.

CHAIRPERSON RICHARDS: So my question is what are they doing, so I,I hear you in terms of the way that they store you know their fuel in, in Washington state and other… But I'm trying to still understand they, they have not gone through any particular issues? There's been no… [cross-talk]

JOHN PETITO: They did…

CHAIRPERSON RICHARDS: …according to…

JOHN PETITO: …initially. Washington State had exactly the same experiences we had. There were reports that were referenced.

CHAIRPERSON RICHARDS: So what are they doing differently now to not go through that experience.

JOHN PETITO: Their fuel supply is a very very precise specification that is blended locally. It's a custom blend for them. None of their fuel sits in tanks. It's delivered by truck or the ferry actually goes to the fuelling facility and gets it sort of fresh if you will. We don't do that. We, we have to have fuel inventory because of our

operational tempo. There is no way that we could start fueling by truck and continue to operate at the level that we do.

CHAIRPERSON RICHARDS: Okay I will go to Costa for some questions. I just don't want us to get into a pattern of not thinking outside of the box… [cross-talk] And I think, and I think that you know the city and you know we, we love working and I, listen we, we love DOT, we love working with DEP. But you know it seems to me that you know we get suck in one way of doing things that this, the last 100 years we've been doing it the same way so therefore this is what we know. And I refuse to believe that we cannot come up… I think there's some creative minds on this thing…

JOHN PETITO: Well Mr. Chairman…

CHAIRPERSON RICHARDS: …that can come up with some creative ways…

JOHN PETITO: If I may that's, that's why in advance of, of this hearing after legislation was introduced we did reach out to MARAD to find out where they were with renewable fuel and where they were going and how we could work in partnership with them and with you to find the best renewable fuel

that meets you emission goals as well as doesn't create an operational problem for the agencies.

JAMES DESIMORE: You know Mr. Chair also want to add that, I think it's in everyone's interest to find renewable fuel. But it has to be studied. It can't just sort of be poured into our vessels and then have the passengers of the ferry be at risk to what is a trial. You know as… has mentioned before tier four would be the highest standard the federal government mandates and our vessels… will be tier four compliant and then of course we're also trying the LNG pile. So we're definitely open to new ways you know and, and the industry's open to new ways. But it takes time to sort of find the right blend and the right fuel that'll work and it'll be safe. And that's really what you know we're trying to maintain as the safety of our vessels.

CHAIRPERSON RICHARDS: And I'm just saying that and I, and I appreciate everything you guys have said because I remember my predecessor obviously when biodiesel it was the big boogeyman in the room. Oh my goodness the city's fleet is going to shut down. The world is coming to an end. But you

know I mean I just had a meeting with the commissioner of DCAS and she alerted me that they're doing B20 in certain areas that they didn't expect to. They're doing B5 in places they didn't expect to. So I don't want us to be short sited here and not think out… and I'm not saying that you are. But I'm, what I am saying is that we should be thinking outside of the box.

JAMES DESIMORE: You know as I stated in my test… I'm very proud. I've been at Staten Island ferry a while now. I'm very proud of everything we've done. None of it has been regulated or foisted on us so we have, we've taken it upon ourselves to try out ultra-low sulfur diesel before it was required. We trialed the B5 on our own. We have the LNG project. We have retrofitted the whole fleet with after treatment. So it's not a matter of saying you know we're thinking you know only this way. We did the biodiesel. You know now we're, we're heavily into this after treatment simply because the federal EPA tier requirements are coming down the road. So it's not like I, I don't have any choice in that at all. Now of course our vessels are a little bit different in terms of the regulatory component we

are regulated by the coastguard. And so we don't have any choice in the matter so we're sort of on that track right now. And you know once again it gets into this, okay well who's going to give the, what's going to give you the cleanest result? You know I, I'd feel pretty comfortable with the ultra-low sulfur diesel and the after treatment. And, and I'd certainly tier four requirement to realize right now today there are no tier four engines in the world alright. The tier four requirement is the US Federal EPA. It doesn't apply to the international community. So the Staten Island ferries, the new ones coming are probably going to be among the first tier four compliant vessels in, in the world. And so you know they're going to be pretty clean. And the rest of the fleet will be fitted out once the technology's available. So I mean it doesn't, I guess my point is you don't necessarily have to go in one direction and which is what we've tried to do is look at a variety of solutions to make sure that the ferries is clean as it can be.

CHAIRPERSON RICHARDS: And have you guys said to the engine manufacturers obviously listen we're looking to do more and I, I would think that

they wouldn't want to lose the city's business, have you guys said to them listen we want to look to do more biodiesel. Would, you know are you guys, are they looking in that particular direction?

JOHN PETITO: No. No I don't think they are because it's… [cross-talk]

CHAIRPERSON RICHARDS: Maybe we need to find some people who are.

JOHN PETITO: …it's a relatively small market.

CHAIRPERSON RICHARDS: Right.

JOHN PETITO: In other words we have to build ferries to service transportation needs of Staten Island. It's not an option of sitting down with EMD because they'll turn around and say you know you're a very small market for us. We build you know engines for rail and whatnot and without Staten Island Ferry we'll get along fine. We're not that big of a player in the market to be able to influence engine manufacturers and see… because biodiesel as I said it's, it's relatively limited use in the maritime industry. So as I said there are other, there are other ways in which to provide clean emissions. And I think that's… you know when

you look at this whole energy picture you got to look at a lot of alternatives. And biodiesel isn't just the only way to provide clean emissions.

CHAIRPERSON RICHARDS: Okay we'll go to Costa for some questions.

COUNCIL MEMBER CONSTANTINIDES: Thank you Chairman Richards. And I definitely appreciate your testimony. I want to begin by saying this is definitely an opportunity for us to work together. And I, I hope that you take it that way and don't take our questions as… because you keep using the word foisted upon. And that's not what governments…

JAMES DESIMORE: Sorry.

COUNCIL MEMBER CONSTANTINIDES: …used that term more than once. And I think when we go through a legislative process it's a partnership between different parts of government where we work together and come to a solution, not us sort of foisting upon legislation where you now have to comply. I, I think, I look through that prism and I hope you do as well.

JAMES DESIMORE: Oh yeah, absolutely.

COUNCIL MEMBER CONSTANTINIDES: So just checking there.

JAMES DESIMORE: Yep.

COUNCIL MEMBER CONSTANTINIDES: Because you used that term more than once.

JAMES DESIMORE: Sorry, I didn't mean… [cross-talk]

COUNCIL MEMBER CONSTATINIDES: But, so tell me about Washington state. Just is the only reason that B5 is a viable fuel, is it only having to do with their fueling? Is that, is that the only, is that the only reason, that's the only challenge that we have? You know is there… they went through the, the process, they found a way to deal with the sludge problems, they were able to put something into the fuel to work it out. So you're saying the only reason we can't comply is this issue of fueling? That, that's what's holding us back here in New York City? We can't find a way to make B5 work here with the framework that we have.

JAMES DESIMORE: Our conversation with the director of Ferry Engineering at Washing State Ferries last week… in other words I, I served on panels… reviewing Washington state, know those people very well. And our director of engineering spoke with theirs. And the gentleman specifically

stated that a lot of the issues we had, just like you had, had to do with two things. It had to do with the quality of the fuel and they did put an additive. But their quality of their fuel as I said is well defined, it's locally sourced. It's delivered by truck to the small ferries, and it's the larger ferries actually come up to the facility. So they're not storing any of their fuel which I think everyone agreed here is that having biodiesel sit in storage tanks for periods of time it tends to denigrate. So that in our conversation with him that's exactly what he, he indicated was how they got from where they are, where they were to where they are today.

CHAIRPERSON RICHARDS: So you're not open to any sort of trial… eight year, you know was it seven years ago I had a lot more hair, I weighed a lot less, I was sitting on that side of the table as a staffer and now I'm sitting here. So a lot has changed in seven years. And I think it may, we may be able to get where we want to go by doing some sort of trial, some sort of blend of B, you know either B2 B5 where we do, we have all the great components you just talked about but also having the

benefit of biodiesel. Are, are you open to having any of those conversations.

JAMES DESIMORE: I mean you know I, I guess you know I'd have to go back and talk about it. Like for example we was, well you got to think out of the box… I, you know I have 70 thousand people a day that have to move back and forth on the Staten Island ferry. Alright so as much as I'd like to say okay we'll bring in trucks, we'll do this, that, and everything else. I mean we can trial it but I can tell you flat out we can't operate our operational tempo with truck delivery. And our, my paramount concern is to make sure the Staten Island community goes back and forth. That's their primary transit mode. So I mean we're certainly willing to sit around but likewise I would hope that you would recognize the tier requirements, the after treatment systems, and a lot of the other things that we're doing that may be better than biodiesel. So I mean I think it's got to be, we need to both probably sit down and work together.

COUNCIL MEMBER CONSTANTINIDES: I would like that…

JAMES DESIMORE: And see you know…

COUNCIL MEMBER CONSTANTINIDES: …and I, I definitely, we definitely recognize that. And I don't, and I, I, again as I started my conversation I don't think we are you know…

JAMES DESIMORE: forcing…

COUNCIL MEMBER CONSTANTINIDES: …attacking you today and, and not recognizing the good work that you've done. So I hope you're not taking this as an attack and…

JAMES DESIMORE: No no no. I'm just trying to explain…

COUNCIL MEMBER CONSTANTINIDES: And we're looking to do this in a way that you know we can have that conversation and make sure that the residents of Staten Island can get back and forth. There was a, utilize the Staten Island ferry, get the best experience possible, our goal today is not to somehow leave them in a lurch in, and I hope that's not what's coming across… mention that more than once as well.

JAMES DESIMORE: No I'm just trying to…

COUNCIL MEMBER CONSTANTINIDES: We're not trying to strand the residents of Staten Island in,

in, we're trying to find the best way in collaboration to be the cleanest possible.

JAMES DESIMORE: I'm just trying to offer that in other words for us to send one of the ferries say to Bayonne to a fuel facility, to get it directly from the facility, it's simply, it's not an option for us because of our operational tempo. So if that's what I want to make clear to you. It's not that we're not opening to trialing different things or say could you have a truck delivery? We can definitely trial a truck but there's no way that we can maintain our operational tempo with truck delivery because we have to fuel twice a week each boat takes several hours. And if you bring in a truck you're conceivably doubling the time. So… but as I said we're certainly willing to sit down and talk with you. It's just, you know we do have these concerns, they are legitimate I think. And you know and I, I think as I said we've got a lot, lot of time and effort going into after treatment systems and I think the biggest concern for the Staten Island ferry is this tier four that we're looking at.

COUNCIL MEMBER CONSTANTINIDES: Mm-hmm.

JAMES DESIMORE: And at that point in time we're going to have the coast guard and the EPA coming down at regular intervals and we're going to have to show them actual data from the emissions of the ferries that these things are compliant. And you know so…

COUNCIL MEMBER CONSTANTINIDES: I definitely hear you on that.

CHAIRPERSON RICHARDS: You know and we don't want to lose site of the goal of everything that we're trying to work towards is lower emissions and I think that's a goal that the agencies share. It's a goal I know the council shares. And that's what we're, that's what we're going to try to work towards. So that's really the, the, the end game isn't really you know is it B5, is it, you know is liquefied natural gas, is it after treatment. The goal is really lower emissions across the board for the city.

COUNCIL MEMBER CONSTANTINIDES: I think that that's a shared goal. I just want to quickly check in with DEP on your willingness to sort of work with us on, on a possible study and, and sort of get us where we want to go.

JOHN PETITO: [off mic] We're always happy to work with council, have converse, further conversation with council on this as well as other topics.

COUNCIL MEMBER CONSTANTINIDES: Alright great. Thank you Chairman Richards.

CHAIRPERSON RICHARDS: Last question. So have you guys… would you consider some sort of storage facility on site? Is there, so…

JOHN PETITO: We, we have, the problem with the biodiesel is storing it. When it sits in the tank for a period of time it begins to denigrate. Theirs is in the ground on site. Ours is in two barges on site. So it is being stored on site.

CHAIRPERSON RICHARDS: Okay. Alrighty [sic] thank you guys. And… just last question. So what would you, so what would you change in this legislation or what do you recommend, how do you recommend we move forward.

JOHN PETITO: I, I would recommend that… maybe the legislation should be that the council works with the two agencies, that should be the legislation at this point. To say that we agree…

that there's a law that we'll get together and actually do some kind of pilot if you like. Rather than saying okay we're going to have to… Because as I say the B20 from what the engine vendors are telling us is really going to be… But a trial, I'm certainly, I'm willing to work with you any day of the week if you want to you know set up some kind of a trial. And if that's the legislation that we trial it and then go from there I think that, I don't think anyone would have any problems with that…

COUNCIL MEMBER CONSTANTINIDES: You know again we, we're anxiously awaiting the, the conclusion of the research that the federal government is doing on this and… renewable fuels. Personally I, you know I think we, we'd like to see where all that comes out before we make any sort of permanent decisions on legislation outside of, of any sort of small trial.

CHAIRPERSON RICHARDS: Now you're not going to let DOT beat you.

COUNCIL MEMBER CONSTANTINIDESH: I don't think I did.

CHAIRPERSON RICHARDS: DOT just said they're willing to do a trial, so DEP.

JOHN POTITO: I was just going to say… we're in a different position than him. He has three new vessels that are under warranty. I can take the 50 year old Kennedy and…

CHAIRPERSON RICHARDS: Right, three new vessels that, that were, 50 percent of which were purchased with the Federal Economic Stimulus… [cross-talk]

CHAIRPERSON RICHARDS: And you guys don't have any old vessels out there that you guys can utilize?

JAMES DESIMORE: We have one.

CHAIRPERSON RICHARDS: There you go. Look at that. You didn't even know that. There's one out there. So can that one be utilized for a trial?

JAMES DESIMORE: We look forward to having that conversation with you.

CHAIRPERSON RICHARDS: Okay. There you go, so we have one. Alrighty, and you have… How many do you have?

JAMES DESIMORE: We'll, we'll, we'll ante up one.

CHAIRPERSON RICHARDS: Alright got it. There you go. So we got a deal. Alight thank you

gentleman, thank you. Thank you. Alrighty we'll have our next panel. Scott Hedderich, I think I'm saying that right, from the Renewable Energy Group, John Minisal [sic], Maniscalco from the New York Oil Heating Association, Daniel Gianfalla, I can't read, oh from United Metro Energy.

UNKNOWN FEMALE: Gentleman can you please raise your right hands. Do you swear affirm to tell the truth, the whole truth, and nothing but the truth today?

CHAIRPERSON RICHARDS: You may begin.

DANIEL GIANFALLA: Good afternoon Chairman Richards and Members of the Environmental Protection Committee. My name is Daniel Gianfalla. I'm President and Chief Operating Officer of United Metro Energy Corp. United Metro energy Corp supplies and delivers gasoline, ultra-low sulfur diesel fuel, biodiesel, bioheat, heating oil, and natural gas throughout the New York metropolitan area. From terminals in Greenpoint, Brooklyn, Riverhead, Long Island, and Calverton, Long Island. United Metro Energy Corp was acquired by entrepreneur New York John Catsimatidis in 2012. He also owns United Refining, a major oil refinery in Pennsylvania that

contributes to energy independence through domestic oil production. Over the past decade UMEC is proud to have partnered with New York City Council and the Mayor's Office on such critical goals as Plan NYC and recent legislation requiring an 80 percent reduction in greenhouse gases by 2050. Today we enthusiastically support Intro 54 which sets a B5 five percent biodiesel minimum fuel standard in city owned and operated ferries. Most notably the Staten Island ferry. We also enthusiastically support Intro 451 which requires B5 blend in marine craft used by the DEP. UMEC is already among the region's largest marketers of biodiesel and we will soon open one of the largest state of the art biodiesel production facilities in North America. Right across the river in Greenpoint, Brooklyn. A one of kind facility in New York City, the facility will make cleaner greener biodiesel more readily and locally available for businesses, building owners, truck fleets, and the city of New York itself to achieve the laudable and uniquely ambitious environmental goals that the city has set for all of us. Particularly relevant to today's hearing is one of UMEC's proudest recent achievements, the opening of the city's very first

public biodiesel marine fueling facility. This new dock is adjacent tour Greenpoint, Brooklyn facility and provides custom blended biodiesel and ultra-low sulfur diesel to commercial marine vessels that will soon include the New York water taxi. We believe that this facility can play a vital role in helping to provide cleaner air to our city, reduce greenhouse gasses, and create greater energy independence. With Intro 54 requiring the Staten Island ferry to use cleanable sustainable B5 or five percent biodiesel at a minimum the city will set the tone for sustainable marine fueling and hopefully result in even more city owned and private fleets going over to biodiesel. The city of New York owns more than two dozen marine vessels including those operated by the NYPD, FDNY and others. Expanding the minimum fuel standards proposed in these two bills to include these and other city owned marine craft would go a long way toward ensuring that our waterways become even cleaner and greener. City of New York has already paved a path toward greater biodiesel use in the heating oil sector and in the transportation sector. We are now in our second heating season where the citywide bioheat fuel

standard has been in effect displacing 30 million gallons of petroleum and counting. And forward thinking agencies like the Parks Department, the Sanitation Department, have been using a B20 blend or more in their truck fleets for a number of years now. We applaud Council Member Constantinides, Chairman Donovan Richards for these major steps towards, forward and request that you consider expanding this biodiesel marine fuel standard to more city owned vessels and encourage private ferry fleets and other private vessels to use more biodiesel. Thank you.

SCOTT HEDDERICH: Think I'm on. Chairman Richards, Councilman Constantinides, I want to thank you for the opportunity to testify today. My name is Scott Hedderich. I'm Director of Corporate Affairs for Renewable Energy Group, REG. Renewable Energy Group is a leading North America advanced biofuels producer. We have 10 active biorefineries across the country and the capacity to produce more than 350 million gallons of biodiesel in the United States. We operate over 20 terminals nationwide. We have six here in the New York Metropolitan area in addition to three marine terminals that we have contractual

relationship with. We're certainly in support of the two bills before the committee today. What I'd like to do though is, is deviate from my written testimony ever so slightly, ever so slightly, to point out first and foremost that every major diesel engine manufacturer in the United States and in Europe warranties to B5. I certainly commend the activities that DOT and Environmental Production have done. They have been forward thinking when it comes to emissions reductions. They have been active. But I think that, that there's some misinformation that's out there. I think that there's some bad data that they're looking at. And I certainly think when you get into the morass of tier 4 engines, tier 3 and, and I'm very familiar with what those things mean that we can move away from from the target. When we talk about EPA requirements for higher tiered engines they're talking about EPA requirements for reducing emissions out the tail pipe, whether that tail pipe be from a vehicle, from a boat, from a train… Most of those emissions technologies are going to be emissions based which means the engine is the same, you got a whole lot of funky things on the back end; new catalysts, new

materials, high tech materials, new ways of routing the exhaust… all those things come with a cost. Any time we talk about emissions reductions they come with a cost, even biodiesel comes with a cost. I'm proud to say biodiesel's cost emissions reductions is a heck of a lot less than employing tier four requirements. I want to get back to what I said. All major engine manufacturers warranty up to B5. In fact there is a standard today for biodiesel in fuel. It in fact is the same standard that suspect the DOT and Environmental Protection are using when they purchase their fuel and that's D975. The reason for that is… and, and none of the previous panelists touched on this, I think there is a real and fundamental difference when we look at marine applications between big marine and what I will call little marine. Big marine is I think what we all think of classically as those ocean going vessels that are going to travel between here and Europe, the west coast and Asia, heavy containerships, heavy tankers, those all have specialized engines that are manufactured for being at sea weeks months at a time. What I would call little diesel, and I think we can look at the city fleet for the best example

are vessels that are used on, on, on the water certainly but utilize existing diesel technologies. In fact the diesel technologies that are present in the Staten Island ferry fleet all come from on road or on rail applications today. And if you look at what the engine manufacturers have to say, EMD, which would be on rail, or caterpillar which would be on, on road, all their heavy equipment now that's new is warrantied to be 20. Now the legacy equipment is not and there's reason for that. You don't typically do a lot of warranty work for machinery and equipment that is now off warranty or for lines that you're no longer building. So that should make sense to everyone. When you look at the engines that are in the larger Staten Island ferry fleet boats they're EMD diesel engines, they're diesel engines that were built for the on road diesel train industry in the 80s and 90s, there are actually engines that have had performance and emissions data studies done on them looking at rail applications and those studies have shown that, that, that B20 can improve engine ware, that's improve, not not hurt it, improve engine ware, certainly reduce particulate matter and, and have some other general

benefits from an improved exhaust standpoint. Caterpillar has done significant amount of work and I think if you look at and talk to, to them directly, look at their website, look at the data that's out there you'll, you'll see that the engines that are in the, in the ferry fleet today not only are capable for B5 are probably capable for B20 as well. I can't stress enough there is a standard in place, there are warranties in place. The ability to move to B5 should not even be being discussed today. I would hazard a guess that if the ferry system is using fuel that's been purchased by the city and the city has purchased that fuel to the D975 specification, which D975 is specification for ultra-low sulfur diesel, and I want to commend the city and the DOT for moving to that long before it was required, that has been a, a significant improvement in air in this, in this city, but if they've done that they could have in fact gotten five percent biodiesel over the last two to three years in their system and not even known of it. And that's because under D975 up to five percent biodiesel is considered diesel fuel which is why engine manufacturers warranty five percent

biodiesel. Now having said that certainly when you look at higher blends, B10 B20, that is a stretch. I certainly hope as, as councilman costa had, had pointed out this is an ongoing discussion between the city council and the agencies that as the agency looks at specking those two new, two new vessels. But it is an opportunity to look at, at purchasing engines that meet B20 specs. Volvo Penta which is a European manufacturer… to give them a nod, does warranty a number of their engines up to B20. So there are opportunities there. So B5 should not be an issue today. I think there is a, a tremendous amount of confusion. It makes me said that that's the case. I mean it's my industry, is not doing a good enough job communicating with, with stake holders and, and users and we need to improve that. But that, that the impediments that were pointed out earlier I think are, are, are phantom impediments that once the, the hard facts are looked at, the warranties that are in place, the, the data that's out there on performance, the opportunities used to feel, fuel that B5 could easily go forward. I, I do think given the concerns that were raised as we took about higher blends we should be looking at, at, at

probably a gentler glide path so the agency's not, not as concerned. I'm going to finish my comment with, with one, one last factoid. So a lot has changed since 08, a lot has changed. Our understanding of the fuel has changed. Our understanding of fuel in general has changed. We've gone to, in the US we've gone to ultra-low sulfur fuel a number of years ago. And in doing that right I'm going to be obvious here for a second we've reduced the amount of sulfur in the fuel. Well what's come to light since then is that sulfur in fuel did a lot of interesting things to mask problems with your fuel storage and handling, problems with water, problems with microbial contamination, problems with, with other fuel degradation issues. And, and all fuel degrades, not just biodiesel. And that once we, we introduce biodiesel which is a urgent [sic] fuel into the marketplace, especially in applications that have gone to ultralow sulfur diesel, if they haven't been diligent in cleaning their fuel systems ahead of time, cleaning their tanks, cleaning their lines what they're going to find is that detergent does exactly what it's supposed to do, cleans everything

out right. It's like going to the doctor and having a nasty procedure done on your digestive tract. Clean as a whistle. Everything that comes out though is horrific and you want to talk about it. You'll get lots of, lots of material in your filters, you'll have to change those filters more frequently. Once that cleaning has taken place… and you don't have to use biodiesel as that cleaning agent. I mean the irony here is that, that, that any, everyone in the fuel handling system has probably taken for granted the need to have clean storage and handling equipment, that, that we've been blessed with having a fuel up until 10 15 years ago that masked those problems. If you go in, you do the proper maintenance ahead of time you, you should not have those fuel filter clogging problems that were alluded to. And when it comes to stability we do have a standard for stability six months within ASTM specs. All fuel degrades over time. All fuel, not just biodiesel so diesel as well. I certainly think there's opportunity to work with the city, understand better, how long they keep fuel in storage, but the fact that it's on barge that's whatever, that's not a big deal. What… a barge, a

tank, an underground… they're all vessels to hold something. It doesn't matter where it is. It shouldn't be an impediment. We can work with these folks. These are great bills. I, I applaud the council for being progressive. It builds on work that was done in years past. I know this is a who-moved-my-cheese moment for some folks in the city. We shouldn't be afraid of that. Thank you.

JOHN MANISCALCO: That was very good wasn't it? Good afternoon Mr. Chairman and members of the Environmental Protection Committee. My name is John Maniscalco and I serve as the CEO of the New York Oil Heating Association, a 76 year old trade association whose members for the most part are comprised of family owned heating oil distributers and terminal operators located throughout the city of New York. Thank you for the opportunity to testify today. NYOHA supports the goals of Intro number 54 and Intro number 451. We'd seek to set a minimum fuel standard of B5 biofuel for all city owned and operated ferries as well as DEP owns and operated marine craft. These bills will push New York City even further toward the goal of cleaner air quality, greater energy independence and

economic growth for the region. Over the past few years NYOHA has worked closely with the New York City Council and the Mayor on, on Environmental Initiatives including the landmark B2 heating oil standard, also known as bioheat fuel… became law in 2012. Now in our second heating season under the bioheat fuel standard I can report that this initiative has been a major success. The city has replaced more than 30 million gallons of petroleum with domestically produced biodiesel, vastly improved air quality, created green jobs, incentivized companies to get buildings to use even higher levels of biodiesel blends, and has not to any large degree seen an adverse impact on cost to building owners. Additionally the city of New York has already embraced biodiesel in its fleet of vehicles. The logical next step is to include ferries and other city marine craft. …supports and expansions to the biodiesel fuel is standard in marine industry starting with city owned ferries and DEP vessels. We'll, we believe this will help the marine sector contribute to improved air quality just as, have buildings have done in the heating oil sector and vehicles in the transportation sector.

New York is a leader of an environmental innovation and the addition of city owned ferries in DEP marine craft would set the example for other cities with active waterfronts. In conclusion I would like to say that this is an exciting step forward. We support and thank this committee and the bill sponsor Costa Constantinides for this untiring efforts in passing legislation that promotes clean green biofuels as well as sensible lean air policies. We at NYOHA look forward to working with the city council and the committee to reduce harmful admissions created by marine craft in the city of New York. Thank you.

CHAIRPERSON RICHARDS: Thank you. So can you speak of what biodiesel blends require special handling or equipment modifications?

SCOTT HEDDERICH: So I think it's important to note first off that all diesel fuel needs some level of, of I wouldn't call it special handling but handling. Without additization diesel fuel will gel at 32 degrees. The difference between diesel fuel from petroleum from oil from the ground versus diesel fuel from, from biodiesel is that you can additize that, that petroleum based diesel fuel

to a much lower degree so It'll perform at zero, sub-zero… we're not able to additize biodiesel quite as well. So then the issue is in cold weather climates and environments what does one need to do different from, from your normal fuel handling activities. If you look at, at Minnesota which has been using biodiesel statewide for a number of years… the short answer is nothing. And the reason the short answer is nothing is because what they've done as a state is to make sure that their diesel fuel storage tanks are heated, you heat diesel fuel to keep it flowing, you heat your lines, you, you heat your, your system throughout. So if one of the concerns about moving diesel fuel in, or sorry biodiesel fuel into the, into the city ferry fleet is perhaps… handling I would say it's not likely to be around storage. The question is what temperature is that fuel stored at? Is that storage heated today? When you use barges you are using the, the thermal value of, of the surrounding water which is above freezing, is that enough are our lines heated, what's the storage like on board vessel and would there be challenges there. At a, at a B5 blend five percent… it, it is diesel fuel. So if we're only

talking about a move to B5 there's nothing different that the city would need to do. Other than to make sure that those tanks were clean ahead of time. Because if they weren't that biodiesel's going, going to clean it out. In terms of, of heat trace, in terms of providing additional equipment that would keep that fuel warm there should be no need. When you look at blends up to B20 there could be. And I say there could be because it depends on each individual fuel handling system. You have to look at, or we'd have to look at, at how the city's purchasing fuel, how it's handling it, how it's then distributed back out to its different distribution points, how that fuel is stored, how long it's stored. I guess like the, the short unsatisfying answer is maybe you would need to add some additional heat, work, maybe not. I'm not sure.

CHAIRPERSON RICHARDS: So can you speak… so obviously DOT was speaking of their pilot in 08 and they spoke of clogging and… [cross-talk]

SCOTT HEDDERICH: So if I had to guess… if I had to guess I would, I would assume that under the theory if it ain't broke don't fix it when the city fleet moved to ULSD there hasn't… and they, but

they use a lot of fuel, they store a lot of fuel. There hasn't been significant what my, my mother and law would call spring cleaning of the fuel infrastructure. They haven't gone back in to see what they got for standing water, what they've got for microbial contamination, what they got for tars, heavy fuel that's come out of solution. And when they went to ULSD those problems began to increase if there's water in the tank. And, and there is excellent data across the US that has shown…and it's not biodiesel as, as the nation moved to ULSD we began to discover we've got water in these tanks and that water creates a whole host of other problems. And that that was the case and when, when they used bio diesel everything… solution and flushed it right out. Again great data out there to show that when you do that… And we've worked with a number of customers on the, on the trucking industry where they have their own tanks, they were having their own fuel, did not clean things out, used biodiesel, had a horrible first response. We had to go and work with them, figure out what was causing the problems, get the water out of the tanks, get the rust out of the tanks. Once things were clean, no issues. No

more additional fuel, fill… hard for me to say, fuel filter changes using biodiesel than you would using just regular diesel. But you have to make sure your system is clean ahead of time.

JOHN MANISCALCO: Mr. Chairman if I could just kind of like address the heating oil sector which is… The heating oil is actually the same as diesel fuel, it's ultra-low. When the industry first went to ultra-low sulfur heating oil within the bioplant there was that detergent that my colleague had mentioned that happened maybe once first delivery, maybe the second delivery, the cleansing application took place. Filters were cleaned. Since then transition has been seamless.

CHAIRPERSON RICHARDS: So the city spoke of… and I,I just want to make sure that I heard you correct. They spoke of diesel manufacture's warranties. And I believe heard the city say that they use Caterpillar.

SCOTT HEDDERICH: So if I could trust the online information from the city I believe there are eight vessels, two or three that use Caterpillar engines, the rest use EMD, two different engines that were, that were designed for heavy duty on road

train applications. All of those should be off warranty first and foremost. But all those manufacturers have said D975 fuel compliant is acceptable for use in their, in their engines even off warranty. So at a five percent blend those Cat engines could take, could take it no problem. Those EMD engines could take it no problem.

CHAIRPERSON RICHARDS: And only up to B5.

SCOTT HEDDERICH: Only up to B5 in those Legacy engines. EMD was sold by General Motors four or five years ago. And while some of their new engines are being warrantied for use up to B20 they haven't done… and they, and they backwards certify the D975 aspect of their engines. They haven't warrantied everything. Again though once it's off warranty I think the issues are different. What's the impact to performance, what's the impact to the fuel handling system? Because I think everyone can agree no one would want, no one, especially me in my industry wants to see on the news a ferry drifting with passengers stranded and the word biodiesel being… that'd be terrible. But when it comes to performance, when it comes to fuel, there should not be issues. When it comes to new engine warranties

not every new engine manufacturer warranties up to B20. That's something that our industry's been working on. We've got about 95 percent of the heavy on road engine. And, and so when I say heavy I mean like the, the big Cats, big Caterpillar, big Cummins engines, engines that would be used in, in this little marine application. That's not to belittle the size of the city fleet. I lost my train of thought because I thought I was belittling the size of the city fleet.

CHAIRPERSON RICHARDS: That's why we need more of an expansion of it.

SCOTT HEDDERICH: So, so when it comes to warranty applications not everyone has, has gone. There was a lot of, of pointing to the Sprinter Vans, Mercedes makes Sprinter, Mercedes does not warrant in the US above a B5, the same vehicle in, in Europe would be warrantied to B7 because that's the standard there and they've been reluctant to go higher. Our… certainly been engaged with them. But as you look at new, new vessel purchases there's a great opportunity and I do think the city has leverage. I do think the city has an opportunity. Because there are large diesel manufacturers that do

warranty to a B20. It just means you have to spec that engine in that, in that city ferry. And, and again we're not talking about the ocean going at sea for six months we're, we're talking about large diesels that have been around for a number of years that are perfect for this application that are perfect for biodiesel.

CHAIRPERSON RICHARDS: Okay great. I'll go to my colleague Costa who has some questions.

COUNCIL MEMBER COSTANTINIDES: Thank you Chairman Richards.

CHAIRPERSON RICHARDS: Council Member Costa, sorry.

COUNCIL MEMBER CONSTANTINIDES: Just want to be clear just because the, DOT was very adamant about, that Washington state did not apply the, the, were a totally different handling system and, and the way they did their fueling and that. Because they did it in such a concise way that, you know that's why they were being successful and that's why we are not able to emulate that in New York City. What would be your response to that statement? I, I see your look to Daniel but…

DANIEL GIANFALLA: I would think on a distribution side anything can be changed, dedicated barges, if it's a barge that's required for their fueling or fueling stations could be added to both ends of the ferry system. So it's not trucks, it's those, those facilities, those storage tanks have filled off hours by trucks, ferry doesn't have to be there, those things could be added. Dedicated barges, clean barges, heated barges if it's a heating issue. We use, we utilize heated barges all year around for the heavy fuels as you know that will soon thank goodness be gone from our… city use. But heated barges exist if that's a concern as B concentration is, is increased. But there's many things that can be done, absolutely. And… but I'm, I'm sure that's how it's handled that in Washington State and that if it's a, a concentrated effort to get it done it, it can be done anywhere.

SCOTT HEDDERICH: So I, I live in the Midwest now so I'd use the word bunkum… but I did grow up in Utica upstate so we would use a different word I'm not, I'm not going to say out in public, my mother would be upset with me. I, I think from the senior leadership's perspective it's, it's a real

difference. But I think when you get down to the nitty gritty of the engineering there's no there there, there's no smoke, there's no fire, there's no there there. Fuel freshness is an issue but it's not an issue that's unique to biodiesel, it's unique to all fuel. When you look at, at, you, you heard, you heard the testimony those ferries are burning a lot of fuel back and forth. There's not a lot that's in storage. They're not going beyond four or five months. We have as an industry really good data last four or five years. New fresh data with, with good analytics that show that our, our fuel can, can last that long, that there's, that there's a minimum of, of handling changes you would need. A heated barge would be one if there's a concern about gelling. It, it, it should not be an issue. And it's certainly one that I think there's a number of companies whether it's ours here at the table or others out there that would be chomping at the bit to sit down with them to, to work out how they could handle it and how they could handle it in low cost basis. Because you know at the end of the day if we're not saving our customer's money we're not going to be in business. The environmental benefit is great but as,

as Shelby Neal pointed out in today's climate everyone loves to talk about environmental benefits if it's the cheapest option. I personally think that's too bad but that's the place that we're at.

JOHN MANISCALCO: If you think about… see I represent most the terminals in New York City, oil terminals. And if you think, I mean those terminals were selling high sulfur product for decades. Then new laws came ultra-low sulfur, another law came biodiesel, had to do certain steps, take, take certain steps in the terminals, that was completed. It's a change, change to some people is pain. But you deal with it, you live through it. And right now I hear of no problems as far as terminal storage in the city of New York for the ultra-low sulfur combined with B2 at least.

CHAIRPERSON RICHARDS: So B2… and do think that B5 we'd be able to sort of transition to a B5 with no real effect… the kind of effects that they were talking about. The…

JOHN MANISCALCO: Correct.

CHAIRPERSON RICHARDS: …the degrading of the fuel and…

JOHN MANISCALCO: No.

CHAIRPERSON RICHARDS: …all the issues that, that they sort of brought up during their testimony, both on the DEP side and the DOT side.

JOHN MANISCALCO: See no problem once so ever with that.

SCOTT HEDDERICH: If I could just add one thing… union pacific railroad has a number of, they have I think the largest diesel train fleet in the US. They operate a number of GM EMD engines. They've been working on B5 use pilot studies in and around their Illinois terminal in the last year. Just another example of a, of a modern user that, that is going forward, those are the exact same engines that are in the, the, the ferries. They haven't had a problem.

COUNCIL MEMBER CONSTANTINIDES: Just really quickly just to sort of speak to the environmental benefits. We've been talking a lot about the economics and… What would be sort of the, maybe you don't have that answer right now but what would be the, how many sort of theoretical cars off the road would we be talking about switching from where we are to going to a B5. What's, what's the

real, the environmental, what are we talking about here?

SCOTT HEDDERICH: Cars off the road I'd have to get you the, the data. But, but…

COUNCIL MEMBER CONSTANTINIDES: Anyway you want to classify it. I don't want to make it too complicated.

SCOTT HEDDERICH: So, so everything that the city has done, that the DOT's done with, with respect to ultra-low sulfur and the steps they take have been, have been great and it has improved the emissions. You can't, you can only get so far using the existing fuel mix. If what you're trying to do is measure the environmental output on the back end. You've got to use fuels like biodiesel, you've got to use in gasoline applications fuels like ethanol. You won't, you won't get the reductions that you need otherwise. You, you could at a, at a cost of developing an engine that, that no one is going to, to, to purchase. Five percent reduction, EPA's got great numbers on the impact particulate matter which I think should be of particular concern to the city since there are lots of high cases of, of, of urban asthma. And particular matter's been show to, to do

that. So you use five percent blend I think you could argue a five percent improvement versus the base, the base ULSD. Obviously higher blends higher, higher improvement accordingly.

COUNCIL MEMBER CONSTANTINIDES: And I definitely as, as I said to DOT and to DEP I definitely appreciate all the efforts that they have made and I, I, today of, was definitely not a hearing to sort of attack them or denigrate their good efforts. I think they've been good stewards and I think we can always you know in collaboration together come up with better ways and, and work to find those cleaner fuels to, to get where we want to go on the emissions side.

SCOTT HEDDERICH: You know I said I think it's a bit of a who-moved-my-cheese moment. I, I do think that's the case. As John said change can be painful for some folks. And this is about change. And I think it's incumbent on, on our industries to point out in this case that that change really isn't all that painful. And, and the steps that you want to take as part of that change, cleaning your fuel system, using a better fuel that, that's, that's competitively priced today versus having to buy a,

an emissions package down the road are cost effective and are, are smart economics for the residents of the city.

COUNCIL MEMBER CONSTANTINIDES: Thank you gentlemen I appreciate your great testimony. Alright thank you Chair Richards.

CHAIRPERSON RICHARDS: Thank you, thank you gentleman. Thank you. Alrighty last person. Ms. Denise, the infamous Denise Katzman [sp?].

DENISE KATZMAN: Good afternoon. Denise Katzman. I'm a business manager with Entertainment IP Resources Corp and a Climate Science Analytic with EnvironHancement. But today I'm speaking as a volunteer advocate that supports both the bills. And I want to thank the committee and Samara for all the good work that continues to happen. Powering city vehicles via biodiesel is the right direction. And a lot of the speakers talked about private entities. New York waterway is a private entity and New York Waterway should be invited into this very interesting platform since it does have a contract with the city. Restaurant waste no matter the size of the operation must be mandated by New York City to be picked up at no charge by a bio, biodiesel

entity and as one of the speakers on the last panel mentioned they're going to be setting up their own biomass facility within the city. And that's great. And more biomass can be recognized as a viable cost saving component of biodiesel because the navy has been utilizing it. NYSERDA supports it. And for the navy to take the initiative is a major step in the right direction because the US Military is the world's largest polluter. So the more the navy does the better. Biodiesel and the version soybean platform that the industry utilizes, I'm not in favor of that. I, I adamantly believe it's the wrong direction because they can up the restaurant waste and they can utilize bio, biomass, soybeans technically promote supportive Monsanto and GMOs which have been bringing a non-sustainable non-resilient platform to our food supply and from a cradle to grave perspective they perpetuate increased GHGs via their transport and biodiversity degradation of soil, nutrients, and cross contamination happens by the growing of GMO soybeans. The prior EPA chair Jim Gennaro was in an award winning documentary called Fuel that showed the way to support biomass via algae. And the…

taking as I was saying taking both restaurant waste and biomass and moving in the right direction since I and the numerous people like me don't desire or need fuel that contributes to GHGs and climate crisis. The, the, the real great reality about taking this right direction, New York City will join California's low carbon fuel standard which is long overdue in the city and is a, a great way to do it. And as of January the 9th there was media around a five million dollar biomass project in California. And the city will save a lot of money by not having to clean up illegal restaurant waste dumping and the legal cost that go hand in hand with that. And it's a double benefit because it will lessen our need for fossil fuels and combustible fuel lines will hopefully not have to be built so we won't have to deal with the leaking and the rupturing and the exploding of them that happen on a daily basis. And last year Bloomberg new energy finance had a recent media piece that disclosed that true clean energy for the first time in three years rose to 3.10 billion. And on a final not I just want to take a brief moment to honor four real American Idols that passed last year, two of which were guardians of

science, Rick Pelts and Theo Kilburn. And two were water keepers that protected our precious water supply, Pete Seeger and Martin Litton. Thank you.

CHAIRPERSON RICHARDS: Thank you so much for your testimony. Before we get out of here I'd just like to thank the council to the Committee of Environmental Protection Samara Swanson and our policy analyst Bill Murray for their hard work in getting us here today. Also want to acknowledge and thank my staff members; Jerrell Burney and Mercedes Buchanan whose my newest intern and this is her first hearing if my… certainly correct. So we hope you got a lot of good information. So with that being said this hearing is now finished.

[gavel]

C E R T I F I C A T E

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.

Date January 14, 2015