

Written Testimony of
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New England Fuel Institute
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U.S. Department of Energy and the Quadrennial Energy Review Task Force
Public Hearing on
“New England Regional Infrastructure Constraints”
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Honorable Energy Secretary Moniz and distinguished guests, thank you for the opportunity to provide testimony on state of the home heating oil industry in New England. My name is Michael Trunzo and I serve as President and CEO of the New England Fuel Institute (NEFI).¹ NEFI is a New England-based trade association that represents the home heating oil industry in the six-state region as well as nationally, with a focus on legislative and regulatory advocacy, industry communications and education.

Let me begin by saying that today’s home heating oil is here to stay. It is an important part of the energy mix in New England and is increasingly abundant, clean, efficient and renewable. With the help of this Administration, we can have even greater success on all these fronts.

There are some unique opportunities to assist New England in addressing its energy future. They include, to name a few, implementing a consistent sulfur content specification for diesel and heating oil to maximize refinery capacity, fuel supply and regional storage infrastructure; enhancing and incentivizing national and regional biodiesel production; and promoting the more efficient transportation of crude oil to East Coast refineries via rail, pipeline, and more Jones Act eligible shipping vessels.

Smart policy choices and investment decisions will make the United States truly energy independent, and at the same time provide New England with a safe, affordable and abundant American-made and American-delivered renewable fuel. The home heating oil industry is well positioned to be a part of the solution.

¹ NEFI is a 501(c)(6) non-profit trade association.

I. About Us

The New England Fuel Institute (NEFI) represents the region's 1,850 mostly small business and family owned-and operated home heating oil and Bioheat® fuel dealers and related services companies.² For more than 70 years, NEFI has been a leading voice and advocate for the home heating oil industry in New England and beyond, representing the industry on a variety of state, regional, and national public policy issues.

Joining NEFI in today's comments are our state trade association partners - the Connecticut Energy Marketers Association, the Maine Energy Marketers Association, the Massachusetts Energy Marketers Association, the Oil Heat Council of New Hampshire, the Oil Heat Institute of Rhode Island and the Vermont Fuel Dealers Association. These organizations advocate for the industry at the state and local level while NEFI does so at the regional level and, through our partnership with the Petroleum Marketers Association of America (PMAA), at the national level. NEFI retains full-time policy staff both in the New England region and in Washington, DC.

Approximately 80 percent of home heating oil retailers qualify as "small businesses" under the Small Business Administration's definitions. They tend to have long-standing and trusted relationships with their customers that span generations and are often intimately involved in their local communities, Chambers of Commerce, churches, charity groups, and youth and veterans' organizations. They are the picture of the quintessential American small business.

Nationwide, our industry includes thousands of entrepreneurial businesses that together employ a large and highly skilled workforce, including well-trained home energy professionals. Our industry has already invested billions of dollars to develop a downstream fuel distribution network that includes terminals, bulk storage facilities, modern delivery vehicles, high-tech fleet management systems and millions of gallons in aggregate residential and commercial storage capacity. This infrastructure was developed without the support of taxpayer money and none is needed to maintain it. It is fully operable and is already delivering the newest generation of clean, efficient and renewable heating oil to millions of homes around the region.

NEFI member companies provide a safe, reliable and environmentally-secure product to more than 2 million homes and support more than 14,000 jobs in New England.³ Our region consumes approximately 30 percent of the nation's heating oil, or an average of 1.8 billion gallons per year. The average heating oil dealer serves 2,000-3,000 homes and delivers a total of 1.5 million gallons of Bioheat fuel to residential consumers on an annual basis.⁴ Many also offer full-service system maintenance plans and home energy auditing

² Bioheat® is a registered trademark of the National Biodiesel Board (NBB) and the National Oilheat Research Alliance (NORA) and refers to any a fuel blend of pure ASTM D6751 compliant biodiesel with conventional high or low sulfur ASTM D396 compliant heating oil.

³ Source: National Oilheat Research Alliance, 2013.

⁴ 2013 Oilheat Survey, Gray Gray & Gray. Available at <http://www.gggcpas.com/index.cfm/page/Oilheat-Survey/pid/10291> (accessed April 14, 2014).

services, as well as budgeting plans and discounted fuel options to help struggling families, veterans, active duty military personnel and the elderly meet their heating costs.

For decades our industry has been a leader in energy efficiency and conservation. In 1989 the average U.S. home that utilized oil for space heating consumed 1,200 gallons of fuel per year. Today, this number is as low as 700 gallons per year, a decline of more than 40 percent.⁵ These efficiencies are the result of industry-led research and development and the use of highly efficient oilheat appliances and other space heating technologies, as well as the education of consumers and energy technicians about conservation best-practices and proper heating system maintenance. The National Oilheat Research Alliance (NORA), an industry program working in coordination with Brookhaven National Laboratory, has invested over \$14 million in this research and development.

Again, America's Bioheat fuel dealers remain committed to providing the safest and most reliable, affordable and environmentally secure product possible. Below we provide more detailed information on how this mostly small business industry is reinventing itself and how it continues to be a part of the great American energy success story.

II. Today's Heating Oil is Clean and Efficient

Blending ASTM D6571 Grade biofuels with any low sulfur super or ultra low sulfur ASTM heating oil or ASTM diesel product, produces a fuel that is environmentally cleaner than natural gas. ASTM D6571 Grade Biodiesel manufactured from waste vegetable oil has no carbon footprint. Natural gas development has no potential to have a smaller environmental footprint than today's Bioheat fuel.

Beginning on July 1, 2014, the sulfur content of much of the region's supply will be dramatically reduced to 500 parts-per-million (ppm). By July 1, 2018, nearly all of the region's heating oil will be reduced to a mere 15ppm.⁶ Heating oil becomes the same product as diesel fuel. This means an abundant and reliable fuel and the merging into one of what federal law currently requires to be separate storage and distribution infrastructures.

The U.S. Environmental Protection Agency (EPA) has promulgated, implemented and enforced various regulations to lower the sulfur content of gasoline and diesel fuel used in motor vehicle engines, non-road engines, locomotive engines and marine (MV-NRLM) engines. As a result, existing gasoline and diesel engines have become more efficient. Low sulfur motor fuels have also spawned the development of a new generation of ultra-efficient gasoline and diesel engines. These enhancements have saved consumers money,

⁵ Source: National Oilheat Research Alliance, 2013.

⁶ That is a decline of an average sulfur content of 0.250% weight by volume to no more than 0.0015%.

reduced dependence on imported oil, removed potentially harmful emissions and improved air quality.⁷

Thanks to the efforts of our industry, the benefits of ultra-low sulfur diesel fuel will soon be enjoyed by heating oil consumers throughout the region. In 2009, oilheat industry representatives from around the country including local, state, regional and national associations overwhelmingly embraced state and federal efforts to require the use of Ultra-low Sulfur (ULS) heating oil nationwide as soon as possible. Since that time, the industry has advocated proposals at the state and local level that would require the phase-in of ULS heating oil throughout the Northeast by 2018, if not sooner.

The chart below provides the timeline for the six New England states' transition to 15ppm ultra-low sulfur (ULS) heating oil. Other states in the Northeast including Delaware, New Jersey, New York and Pennsylvania have also approved similar requirements which could lead the home heating oil market to 15ppm ahead of New England's regulatory deadlines (outlined below).

Transition to Ultra-low Sulfur in New England†

State	Current Max.	500ppm	50ppm	15ppm
Connecticut	2,000-3,000ppm	July 1, 2014	-	July 1, 2018
Maine	3,000-5,000ppm	-	July 1, 2016	January 1, 2018
Massachusetts	3,000ppm	July 1, 2014	-	July 1, 2018
New Hampshire	4,000ppm	-	-	-
Rhode Island††	5,000ppm	July 1, 2014	-	July 1, 2018
Vermont	20,000ppm	July 1, 2014	-	July 1, 2018

†State laws or regulations to lower the sulfur content of heating oil: Connecticut (296 C.G.S. §16a-21a and RCSA §22a-174-19b); Maine (38 M.R.S. §603-A); Massachusetts (310 C.M.R. 7.05); and Vermont (10 V.S.A. §585 and APCR §5-221(1)). Many of these States also included requirements that the sulfur content of residual fuels and other distillate fuels be reduced. Note that New Hampshire is the only New England state that has not yet proposed or enacted a requirement to lower sulfur in heating oil.

††The Rhode Island Department of Environmental Management's Office of Air Resources proposed regulations to reduce the sulfur content of heating oil on March 14, 2014. It is expected to be approved sometime this year (see proposed APC Regulation No. 8).

The benefits of this more efficient, cleaner, and environmentally friendly heating fuel are numerous. First, there are obvious air quality benefits. Transitioning the industry to an exclusively ULS product will eliminate thousands of tons of SO2 emissions and result in cleaner air and widespread health benefits across the region.

⁷ The EPA's MV-NRLM regulations did not lower the sulfur content of home heating oil. The EPA has historically viewed heating oil as a regional product utilized largely in the Northeast. Questions have also been raised as to whether or not the EPA has the authority to regulate the sulfur content of heating oil under the Clean Air Act.

Second, NORA estimates that consumers could enjoy considerable cost savings as ULS heating oil can save customers up to 12 cents per gallon thanks to an increased efficiency in existing systems, the reduced need for system maintenance, and increased system longevity.⁸ As the specification for highway diesel fuel and home heating oil converge at 15ppm, reduced storage and delivery costs for fuel oil dealers may provide additional savings. Any price differential that might be realized in the transition from high sulfur to low sulfur fuel has been shown to be negligible thanks to these proven cost savings.

Third, the regional storage infrastructure will be greatly enhanced when diesel and heating oil are at the same 15ppm specification. The current storage capacities for two varying spec fuels will be switched to one fuel, thus increasing the efficiency of the storage capacity dramatically. Many wholesaler suppliers and retailers with bulk storage are already transitioning to this fuel, which will benefit businesses, consumers, fuel supplies, and the environment.

Lastly, ULS heating oil, blended with an increasing volume of biodiesel, will allow the introduction of a new generation of ultra-efficient oil-fired appliances into the North American market. Currently, only a few oil-fired furnaces and boilers meet a 90 AFUE rating. ULS will allow the introduction of inexpensive condensing technologies currently in use in Europe (which has a 50 ppm ultra-low sulfur heating oil standard) that can increase AFUE ratings by 6.5% and enable a wide variety of competitively-priced appliances with ratings in some cases well above 90 AFUE.⁹

Recommendations: The Administration should be active and vocal in support of the industry-wide transition to an ultra-low sulfur heating oil product throughout the entire Northeast, as it is in keeping with the President's environmental goals and is in the interests of the region's businesses and consumers. Our industry stands ready to work closely with the U.S. Department of Energy (DOE) on this issue.

III. Heating Oil is Renewable

Industry-wide, we are now blending sustainable biofuels - often made right here in New England - into the region's fuel supply. Almost all heating oil dealers already sell blends of up to 5 percent biodiesel, known as "B5." Some dealers are experimenting with up to 20 percent blends, known as "B20" and report positive effects on existing equipment. In fact, many report an increase in system efficiency and reduced need for system maintenance or repair. Laboratory testing at Brookhaven National Laboratory has confirmed that higher Bioheat fuel blends operate more efficiently than conventional oil and reduce, if not eliminate, operable fuel leaks. The industry will soon advance amending the ASTM specification of Bioheat fuel from its current 5% to a 20% biodiesel blend and we ask the Administration for their assistance in this approval once filed.

⁸ Source: the National Oilheat Research Alliance, 2009

⁹ The Oilheat Manufacturers Association, which represents U.S. manufacturers of oilheat appliances, and Tom Butcher of Brookhaven National Laboratory, "Benefits of Ultra-low Sulfur Heating Oil," October 7, 2009.

When blended with ultra-low sulfur (15ppm) fuel, biofuel-blended home heating oil provides superior air quality and other environmental benefits. The Northeast States for Coordinated Air Management (NESCUAM) has found that it further reduces overall SO_x emissions as well as nitrogen oxide, particulate matter and mercury, and that a B20 blend produces at least a 16 percent reduction in carbon dioxide emissions. This has been proven to result in a better lifecycle greenhouse gas footprint than natural gas, assuming a methane leak-rate of as low as 1.4 percent. “Because biofuels are renewables, when blended with home heating oil, they reduce the global warming potential below that of natural gas,” NESCUAM said.¹⁰

NEFI estimates that a B20 blend could eliminate 1.3 billion gallons of conventional petroleum fuel and 9.26 million metric tons of carbon dioxide emissions nationwide each year. That is nearly 400 million gallons of conventional petroleum fuel and 2.6 million metric tons of carbon dioxide emissions per year in New England alone.

We strongly urge the QER Task Force to review the study submitted by the Massachusetts Energy Marketers Association to the Massachusetts Department of Energy Resources (DOER) which draws similar conclusions (a copy of this document has been provided with this testimony).¹¹ Additional study is needed regarding the environmental impacts of Bioheat fuel when compared to natural gas given recent and well publicized findings that methane leak rates and related greenhouse gas impacts of natural gas may be much greater than official estimates.¹²

The benefits of biodiesel blended heating oil are well documented. Our locally-produced and renewable heating fuel is providing lower costs and a greener fuel than would otherwise be available in the heating oil market, and one that, on an environmental basis, is performing as well or better than competing fuels. Plus, we already have an extensive infrastructure to deliver this “fuel of tomorrow” today.

Recommendations: The Administration should be active and vocal in its support of the transition of heating oil to a more affordable, efficient and environmentally secure renewable fuel. NEFI encourages the Task Force to explore ways to increase the production of biofuels that are ready for introduction into the region’s heating oil supply and encourage their use. The Administration should support the industry’s application to amend the ASTM D-6751 specification of Bioheat fuel to a 20% biodiesel blend or higher.

This includes support for the retroactive renewal of the recently-expired \$1 per gallon biodiesel tax credit and keeping volumetric requirement for biodiesel in the EPA’s Renewable Fuels Standard (RFS) on parity with current and future production levels. NEFI

¹⁰ NESCUAM, “Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues,” December, 2005, p.2-7.

¹¹ Massachusetts Energy Marketers Association (MEMA), prepared by Exergy Partners Corp. and submitted to the Massachusetts Department of Energy Resources (DOER) as part of its Natural Gas Expansion Study Stakeholder Response, updated on April 16, 2014.

¹² Brandt, A.R., et al., “Methane Leaks from North American Natural Gas Systems,” Science Magazine, Vol. 343, February 14, 2014, pp. 733-735

also believes the DOE and the EPA should partner with the U.S. Department of Agriculture (USDA) to target grants, loans and other assistance to (1) New England companies that aim to develop heating fuel derived from unconventional feedstocks such as tallow, biomass and agricultural waste, or from the liquefaction of natural gas; and (2) the development of renewable energy infrastructure in New England including bio-refineries, storage facilities and distribution networks. NORA has been instructed by Congress in its recent reauthorization to dedicate additional resources to the research, development and deployment of renewable fuel technologies such as advanced biofuels in the home heating market.¹³ The DOE, EPA and USDA should also work closely with the NORA program on the development of advanced biofuels and other alternative heating fuels going forward.

IV. Proposals to Expand Access to Natural Gas

Large-scale energy users, including power generators, interruptible natural gas users such as industrial complexes, heavy industry, large apartment buildings, municipal facilities, schools, and other academic institutions, routinely use equipment that can be operated by more than one fuel. When heating or cooling demand, industrial production, and electrical production all peak simultaneously, the economic demand for natural gas exceeds the supply.

When low supply increases the cost of natural gas, energy users return to more reliable heating oil as their energy source. Building additional gas infrastructure to meet this temporary peak demand is not only costly but also bad public policy. Most natural gas pipelines run under city streets that are already under stress and would require public investment in addition to the cost of the pipeline. Adequate planning by utilities and their customers would allow for increased regional supplies of heating oil. Such planning would eliminate or reduce any economic price spikes caused by sudden and temporary changes in demand. The short-term price spikes in natural gas are far greater in percentage than the price movements in liquid fuels.

If public policy shifts electric generation to rely on natural gas in even larger percentages of capacity to replace coal and nuclear generators, then the more reliable, abundant, and renewable Bioheat fuel should be used for space-heating demand. Natural gas is not easily stored in New England in large volumes, and is easily overwhelmed by sudden changes in demand. Large increases in pipeline capacity to meet peak demands will create other economic stresses when they operate below rated capacity.

The recent 2013-2014 winter weather provided a perfect example of the stresses caused by simultaneous demands from industry, electric generators and space heating needs. The heating oil industry has a proven track record to bridge the gap without costly public investment.

The DOE and national policymakers must also consider that much of the existing natural gas infrastructure is aging or obsolete, is prone to leaks and, in some cases, even poses life-threatening situations. Gas leaks also have significant impacts on climate change. Despite

¹³ Pub.L.113-79, §§12401-12410

being hailed as a global warming-friendly alternative to petroleum, the truth is that natural gas is 90% methane, which 86 times more potent a greenhouse gas than carbon dioxide, a byproduct of heating oil, over 20 a year period.

A recent staff report by the U.S. House Committee on Natural Resources found that the nation's natural gas pipelines released 69 billion cubic feet of natural gas into the atmosphere in 2011 alone; equal to carbon emissions from six million automobiles. Moreover, the report found that these natural gas leaks cost natural gas consumers more than \$20 billion over ten years as utility companies continued to charge ratepayers for this "lost gas". "Lost gas" has also resulted in nearly 800 significant incidents that have killed 116 people, injured 465 others and caused more than \$800 million in property damage. The Conservation Law Foundation report entitled "Into Thin Air: How Leaking Natural Gas Infrastructure is Harming our Environment and Wasting a Valuable Resource" found that in Massachusetts alone as much as 3.6 million tons of carbon-dioxide equivalent methane is lost to leakage each year, about 4.2 percent of the state's total greenhouse gas inventory, and at a cost of \$38.8 million annually that has been passed on to the state's natural gas ratepayers. "Yet current state and federal policies actually provide disincentive for pipeline owners to aggressively find and fix these leaks" the report concludes.

Recommendations: Before investing in new natural gas infrastructure or expanded pipeline capacity, state and federal governments should require that existing lines are repaired or replaced at the expense of for-profit utilities themselves, not taxpayers or ratepayers. Power generators, large-scale consumers, heating dealers and supply should coordinate to plan properly and hedge for supply situations prior to each heating season to ensure adequate access to all heating sources. While liquid fuels continue to be the backstop for energy consumption, its suppliers must be an integral part of the public policy planning.

V. Strengthening New England's Petroleum Infrastructure

The liquid fuel industry has a long history of bringing adequate supplies to New England customers from all corners of the world. As we transition to a sustainable regional supply based upon energy produced in the United States, the Administration needs to ensure that low-cost North American crude oil is able to be transported the western United States to East Coast refineries, and storage terminals. This will include all transportation methods, including rail, pipeline and ocean-going vessels.

Our region remains highly dependent on product delivered by barge from the East Coast, U.S. Gulf Coast (USGC) and U.S. Virgin Islands, and from western regions and Canada by truck and rail. The Jones Act of 1920¹⁴ restricts U.S. port to port deliveries to vessels that are American made, flagged and crewed. The number of vessels needed to deliver product to U.S. ports in the region needs to be increased. One expert notes that "without Jones Act

¹⁴ 46 U.S.C. §30104.

ships, USGC product exports that cannot be moved will move to the international market rather than closer domestic markets” such as the Northeast region.¹⁵

In other words, we need more American “Jones Act” ships, built with American workers in American shipyards and manned by American crews to go to American refiners to make liquid products for American homes.

Pipelines are also a safe and efficient means for transporting fuel. For example, the U.S. State Department in its recent final Supplemental Environmental Impact Statement (EIS) for Keystone XL found that modern pipelines are safer and more environmentally sound option than transporting petroleum by truck or rail. However, there are no pipelines that currently bring affordable North American crude oil or refined products directly into New England. The industry has responded by moving this crude oil from the Bakken formation and elsewhere to the East Coast and Canadian refineries by mostly rail and barge. Unfortunately, infrastructure projects designed to develop or expand terminal operations or bulk plants, or to reverse pipelines to bring lower cost petroleum into the region have been met with fierce opposition from environmental activists in the public and in state and local government. These “protests” have slowed the progress of essential infrastructure in our region, and harmed local businesses and consumers.

Although no official proposal has been announced, some have proposed reversing the flow of the Portland-Montreal Pipeline to allow the transport of oil (in the form of raw bitumen) to Maine’s South Portland marine terminal facilities. Proponents argue that doing so would allow the transport of Canadian oil through the Portland terminal and then on to East Coast refineries and the Irving Oil refinery in New Brunswick, Canada. These refineries provide a significant portion of home heating oil and other refined petroleum products to the New England region. Therefore, the possibility of a Portland pipeline reversal should be a part of any comprehensive plan to improve the integrity of the energy supply in the six-state region.

Contrary to what opponents of such a plan might say, there is no evidence that the Canadian oil sands product, which is largely bitumen, behaves any differently than crude oil. The State Department EIS said that bitumen “moves through pipelines in a manner similar to other crude oils with respect to flow rate, pressure, and operating temperature. There's nothing extraordinary about pipeline shipments of diluted bitumen to make them more likely than other crude oils to cause releases.” Recent spills of bitumen in Michigan and Arkansas were not shown to be the result of the product, but of external, unrelated structural defects in the pipelines.

Despite these facts, anti-oil activists continue to make false claims about the safety and environmental soundness of Canadian oil in general and the possible reversing the Portland-Montreal pipeline in specific. These protests have resulted in a city-imposed moratorium on moving Canadian crude oil through South Portland through May 5th that could, according to the Maine Department of Environmental Protection “significantly

¹⁵ Lindemer, Kevin J., “Market Implications of East Coast Refinery Closings,” Prepared remarks for the Pennsylvania Petroleum Marketers and Convenience Store Association (PPMCSA), February 6, 2012, pp. 23-24.

reduce the availability of oil products in Maine and increase energy costs to Maine citizens and businesses.” Activists in Washington are even going so far as to pressure the U.S. Department of State to subject any proposal to reverse the Portland pipeline to the same environmental review and national interest determinations as a new construction cross-border facilities such as the Keystone XL pipeline. This is an unreasonable request, especially given that no formal proposal to reverse the pipeline has even been filed with the State Department or the Canadian government. It is purely motivated by politics and will only harm consumers and small businesses in our already energy-strapped region.

Recommendations: As the region transitions to an ultra-low sulfur heating oil in the coming years, supplies of all distillate will only become more dependent on supplies from refineries in the Gulf Coast, Pennsylvania, New Jersey and the Virgin Islands and Canada, as opposed to higher sulfur foreign imports delivered by non-Jones Act ships from Russia and elsewhere. Therefore, the QER Task Force should support investments in upstream (or above the terminal rack) petroleum transportation in New England and the broader Northeast region that will help secure adequate supply and bring lower cost North American energy to our region’s citizens. This should include support for the reversal of the Portland-Montreal Pipeline and other west-to-east pipeline projects that can deliver high quality and lower cost crude to refineries on the East Coast and in eastern Canada. The industry currently has the downstream infrastructure ready to deliver this product to New Englanders. The Administration should minimize regulatory barriers and related delays for infrastructure projects and engage Congress on new legislation to reform the Jones Act or issue appropriate waivers to improve the availability of seaborne vessels that can cost-effectively deliver product to the New England region.

VI. Conclusion

As detailed above, our industry is already contributing to a more affordable, sustainable and energy future for New England. Our member companies and allied industries operate to serve over 6 million New Englanders who choose safe, reliable, clean, efficient and renewable Bioheat fuel to keep their families warm.

NEFI hopes that as the QER Task Force vigorously examines the energy infrastructure needs of the United States and especially New England, that the “all-of-the-above” energy policy proclaimed by this Administration truly includes an “all fuels” strategy that will help to bring the United States true energy independence within our lifetime. Heating oil, and the small businesses that provide it to American homes, remain a vital part of the region’s energy supply and future.

Again, thank you for the opportunity to testify and I remain eager to work closely with you on these issues and answering any follow-up questions that you might have.