New England Fuel Institute

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March 28, 2018

The Hon. Kevin Brady, Chairman
House Committee on Ways & Means
1102 Longworth House Office Building
Washington, DC 20515

The Hon. Richard Neal, Ranking Member
House Committee on Ways & Means
1139E Longworth House Office Building
Washington, DC 20515

Subject: Extension of the Biodiesel and Renewable Diesel Tax Credit (26 U.S.C. §40A)

Dear Chairman Brady and Ranking Member Neal:

We are writing in response to your request for stakeholder input on "temporary" tax provisions, also known as "tax extenders." Congress should be commended for extending the $1 per gallon biodiesel and renewable diesel tax credit retroactively for 2017. However, stakeholders at all levels of the distribution stream from producer to retailer are now operating in an all-too-familiar period of uncertainty as to whether the credit will be renewed for 2018 and beyond.

Considering this, we urge the committee to support a multi-year retroactive extension of the biodiesel tax credit (BTC) given its many benefits for small businesses, jobs and consumers, especially in the home heating oil industry, as well as for the environment and local economies.

Background

Since 1942, the New England Fuel Institute (NEFI) has been a leading voice for America's wholesale and retail heating oil marketers and related service providers. Most are small, family-owned and operated businesses that deliver a reliable, efficient and *increasingly renewable* heating fuel to more than 6.5 million homes and businesses nationwide.[1] While almost every state has homes and businesses that utilize heating oil (also referred-to as "fuel oil"), 80-percent are located in the Northeastern United States.[2]

Figure 1. Heating Oil Use in the Northeast

State	Homes with Oilheat	% of State Total	Avg. Annual Volume[3]
Connecticut	595,244	44%	487 Million Gallons
Maine	359,181	65%	282 Million Gallons
Massachusetts	746,949	29%	650 Million Gallons
New Hampshire	241,284	46%	178 Million Gallons
New Jersey	336,160	11%	263 Million Gallons
New York	1,819,152	25%	1.28 Billion Gallons
Pennsylvania	899,357	18%	723 Million Gallons
Rhode Island	137,451	33%	134 Million Gallons
Vermont	114,826	45%	101 Million Gallons
Total New England	*2,194,935*	*39%*	*1.82 Billion Gallons*
Total Northeast	*5,249,604*	*25%*	*4.08 Billion Gallons*
Total U.S.	**6,533,188**	**6%**	**6.31 Billion Gallons**

American businesses and consumers that utilize heating oil are well represented on the House Ways & Means Committee. At least 21 committee members are from districts with significant heating oil demand, including twelve Republicans and nine Democrats (see Figure 2). In total, these members represent more than 450,000 households and an estimated 1.2 million consumers that use heating oil.

Figure 2. Committee Member Districts with Heating Oil Usage[4]

Member Name	Congressional District	Homes with Oilheat	Est. Consumers[5]
Republican			
Rep. Mike Bishop	Michigan, 8th District	3,476	9,000
Rep. George Holding	North Carolina, 2nd District	5,617	14,600
Rep. Mike Kelly	Pennsylvania, 3rd District	23,783	61,800
Rep. Pat Meehan	Pennsylvania, 7th District	57,626	149,800
Rep. Kristi Noem	South Dakota, At Large	8,272	21,500
Rep. Erik Paulsen	Minnesota, 3rd District	1,112	2,900
Rep. Tom Reed	New York, 23rd District	26,262	68,300
Rep. Dave Reichert	Washington, 8th District	3,695	9,600
Rep. Jim Renacci	Ohio, 16th District	5,816	15,100
Rep. Tom Rice	South Carolina, 7th District	3,108	8,000
Rep. Adrian Smith	Nebraska, 3rd District	1,501	3,900
Rep. Jackie Walorski	Indiana, 2nd District	1,418	3,700
Democrat			
Rep. Earl Blumenauer	Oregon, 3rd District	15,164	39,400
Rep. Joseph Crowley	New York, 14th District	68,701	178,600
Rep. Brian Higgins	New York, 26th District	5,063	13,200
Rep. John Larson	Connecticut, 1st District	96,541	250,000
Rep. Richard Neal	Massachusetts, 1st District	91,748	238,500
Rep. Bill Pascrell	New Jersey, 9th District	15,392	40,000
Rep. Mike Thompson	California, 5th District	1,768	4,600
Rep. Ron Kind	Wisconsin, 3rd District	13,178	34,300
Rep. Suzan DelBene	Washington, 1st District	2,912	7,600

Today's consumers are now utilizing home heating oil blended with advanced biofuels including biodiesel and renewable diesel. Blends of biodiesel and home heating oil are often referred-to as Bioheat® Fuel.[6] According to a recent survey by the National Oilheat Research Alliance (NORA), "5-percent (B5) blends are being used seamlessly across the [oilheat] market." Some retailers are delivering twenty-percent (B20) or higher blends to their consumers.[7] Use of this next-generation heating fuel brings with it many potential benefits.

Benefits of Biodiesel-blended Heating Oil

Studies by NORA, Brookhaven National Laboratory and other non-partisan research organizations have consistently found numerous benefits to the blending of biodiesel and other renewable fuels with today's clean and efficient ultra-low sulfur heating oil (ULSHO).[8] This includes benefits for businesses, consumers, the environment and the broader U.S. economy.

These benefits are being realized *today* thanks to billions of dollars of commercial investments in biodiesel production; well-regulated, safe and reliable liquid fuel transportation, distribution and storage infrastructure; and the presence of storage tanks in more than 6.5 million U.S. homes. No new pipelines or transmission lines or conversion of space heating equipment is necessary.

Environmental Benefits

Biodiesel-ULSHO blends have been proven to reduce harmful emissions. A 20-year atmospheric lifecycle analysis of carbon dioxide equivalent (CO_{2e}) emissions finds blends as low as two-percent (B2) to be *equivalent to* that of natural gas.[9] We estimate that most heating oil consumed in the Northeast in recent winters contained an average of two-percent biodiesel. Analyses based on a 100-year atmospheric lifecycle find that blends of just under 15-percent (B15) yield *fewer* CO_{2e} emissions than natural gas.[10] As mentioned, some heating oil marketers are offering blends as high as 20-percent (B20).

If the entire Northeastern heating oil market were to utilize a five-percent Bioheat blend region-wide, it would displace 205 million gallons of conventional petroleum each year. This would eliminate 1.7 million metric tons of carbon dioxide (CO_2) emissions, equivalent to the removal of more than 355,000 passenger vehicles from the road each year.[11] Nationwide, a five-percent blend would displace 316 million gallons of conventional petroleum and eliminate 2.6 million metric tons of CO_2 each year, equivalent to the removal of 550,000 passenger vehicles from the road.

In addition to carbon emissions, NORA has also observed considerable reductions to criteria pollutants and particulates.[12] This includes particulate matter, sulfur and nitrogen oxides, mercury, carbon monoxide and aromatic hydrocarbons emissions. The resulting improvements to air quality provide public health and environmental benefits such as reductions to acid rain and regional haze.

Figure 3. Bioheat Emissions Reductions[13]

Emissions	5% Biodiesel (B5)	10% Biodiesel (B10)	20% Biodiesel (B20)	100% Blend (B100)
Carbon Dioxide (CO_2)	4%	8%	16%	81%
Nitrogen Oxides (NO_X)*	≥ 5%	Varies	≤ 8%	≤ 35%
Sulfur Oxides (SO_X)	5%	10%	20%	100%
Particulate Matter ($PM_{2.5}$)	≥ 3%	≥ 6%	12-16%	≥ 47%
Carbon Monoxide (CO)	≥ 3%	≥ 5%	≥ 9%	16-40%
Hydrocarbons	5%	10%	20%	100%

* Nitrogen Oxide emissions reductions have shown to vary greatly based on the type of appliance used. Reduction estimates shown are for residential space heating equipment. The NBB has found commercial boilers utilizing higher blends can reduce NO_x emission by up to 35%.

Consumer Benefits

In conjunction with the U.S. Environmental Protection Agency's (EPA) Renewable Fuel Standard (RFS), the Biodiesel Tax Credit (BTC) helps increase demand for biodiesel-blended heating oil by reducing consumer prices. Given the competitive nature of the home heating market, RFS credits and the BTC are passed-on through the distribution chain from producer to importer/supplier, retailer and, ultimately, the consumer.

Consumers also benefit from relative fuel quality and performance properties. Blends of biodiesel and ULSHO not only improve heating system performance and longevity and reduce instances of customer service calls. Rigorous testing shows that "blends of up to 20-percent (of biodiesel) can be used with heating oil fuels with performance equivalent to - if not better than - conventional fuel oil," and that few modifications to existing systems are necessary to realize these benefits.[14]

"Biodiesel blends provide added lubricity and a higher, safer flash-point than conventional fuel oils, while having higher cold flow properties and slightly higher viscosity," NORA reports.[15] The biofuels and heating oil industries are also actively pursuing the development of new feedstocks and technologies that could result in fuels with even greater emissions reduction and cold weather performance benefits, including at blends well above 20-percent. This includes the use of renewable diesel and the development of liquid fuels derived from woody biomass.

Lower sulfur properties of biodiesel-ULSHO blends are also helping to expedite the introduction of lower-cost, compact and ultra-efficient condensing units into the U.S. space heating market. These systems offer AFUE ratings that exceed 90-percent. The above fuel quality and system performance and efficiency benefits result in meaningful consumer savings, in addition to environmental benefits.

Commercial & Economic Benefits

The sale and use of biodiesel-blended heating oil products also offers benefits for America's mostly small-business home heating oil marketers. Foremost, it allows them to help meet consumer demands for cleaner, more efficient and environmentally-secure fuels. A 2015 survey of home heating oil consumers found that 64-percent say a renewable component makes them feel better about using the fuel and 54-percent say it makes them less likely to convert to a competing fuel.[16] Preventing conversions to fuels like natural gas (which is mostly methane, a potent greenhouse gas) by encouraging use of renewable fuels is good for the fuel marketer, the consumer, and the environment. This is especially so in New England and New York, where natural gas prices are higher than the national average[17] and where governors, agencies and legislatures have aggressively advanced carbon-reduction policies.

Biodiesel blends also provide small heating fuel marketers the opportunity to support state and local carbon-reduction efforts, including new laws requiring the sale of renewable fuels, and provides an alternative to carbon taxes and other controversial policies. A multi-year extension of the BTC can provide biodiesel producers, blenders, heating oil marketers and their consumers greater certainty as state and local governments continue to evaluate, enact and implement these policies.

For example, Rhode Island and New York City currently require five-percent biodiesel blends in all heating oil sold.[18] The New York City law further aims to phase-in a 20-percent blend by the winter of 2034. On September 13, 2017, New York Governor Andrew Cuomo singed a law requiring a five-percent blend in all heating oil sold in Nassau, Suffolk and Westchester counties effective July 1, 2018. Along with New York City, this region comprises 70-percent of the state's heating oil market. In total, we expect the Rhode Island and New York laws will require more than 60 million gallons of biodiesel annually, mainly during the winter months.

Massachusetts has approved regulations offering alternative energy credits to retail heating oil marketers that sell biodiesel blends of 10% or higher effective January 1, 2018.[19] The new regulations have the potential to displace 65 million gallons of petroleum fuel and reduce CO_2 emissions by 528,000 metric tons each year. This is the equivalent of removing more than 113,000 passenger vehicles from roads annually.[20] Under the new law, the heating oil industry will make a considerable contribution towards state's Global Warming Solutions Act requirement of an 80-percent reduction of GHG emissions from 1990 levels by 2050.[21]

Other states in the Northeast have considered (or are soon expected to consider) similar policies to encourage or require a renewable component in the local heating oil supply.

Economic Benefits

The production, sale and use of biodiesel-blended heating oil also support state and local economies and thousands of American jobs. As mentioned, the availability of a clean-burning, efficient and increasingly renewable heating fuel provides an attractive alternative to residential conversions and government policies to encourage them, thereby preventing the loss of heating oil market share to competing fuels such as electricity, propane and natural gas. This will help preserve thousands of small energy businesses on Main Street and good paying jobs for tens-of-thousands of Americans nationwide.

Growing demand for biodiesel in the heating oil market also supports American farmers and biodiesel producers. The space heating market provides feedstock growers and biodiesel producers a demand-source during the off-season for on-highway biodiesel demand, which peaks in the summer. According to the National Biodiesel Board (NBB), the biodiesel industry supports 64,000 jobs, $11.42 billion in economic impact, and $2.54 billion in wages paid.[22] The National Oilheat Research Alliance estimates that almost 18-percent of these benefits can be attributed to the growing demand for biodiesel in the heating oil market.[23] This translates to 11,500 jobs, $2 billion in economic impact, and $450 million in wages paid.

Important Role of the Biodiesel Tax Credit (BTC)

The BTC has aided in the development and growth of the market for biodiesel and biodiesel-blended heating oil and the economic competitiveness of these fuels. First, the BTC has been a proven success when it comes to the production of biodiesel. The National Biodiesel Board estimates that 100 million gallons were commercially available prior to the credit. According to the EPA, that number grew to a historic 2.9 billion gallons in 2016.[24] This has helped to develop a market for renewable fuel in the heating oil sector and meet growing demand for biodiesel in the Northeast.

Second, because the BTC is structured as an incentive to blend biodiesel into the existing fuel supply, it has helped develop a market for biodiesel in states and regions where production is limited. As an incentive to blend biodiesel and renewable diesel, the BTC encourages heating oil suppliers in these regions to supplement local supplies with imports of sustainable biofuels from elsewhere in the United States, primarily the farm-rich Midwest, or from foreign producers. The BTC also provides an incentive to small local producers in these areas to invest in their businesses and expand capacity, thereby enriching local economies, expanding the available fuel supply, and creating new jobs.

Regional suppliers have long-stated that a multi-year extension of the biodiesel tax credit will inject much-needed stability and confidence in the markets for biodiesel and biodiesel-blended heating oil. As previously suggested, it will also help regional suppliers, retailers and consumers respond to recent changes in the market that have affected biodiesel sources and demand, including state and local policies designed to encourage or require its use, and to make necessary capital investments in blending, storage and distribution infrastructure.[25]

Conclusion

Biodiesel-blended heating oil provides measurable benefits for businesses, consumers, the environment, and local economies. Along with other federal and state incentives, the BTC has played an important role in helping to ensure biodiesel supplies necessary to meet growing demand in the heating oil market. It has also led to billions of dollars of investments in related production, storage, blending and distribution infrastructure. The BTC can not only continue to serve this purpose, but a multi-year extension can provide much-needed market certainty for heating oil markers, biodiesel producers and other industry stakeholders.

If you have questions or require additional information regarding this issue, please contact Jim Collura, NEFI Vice President & Director of Government Affairs at (202) 441-8857 or by email at jim.collura@nefi.com.

Thank you in advance for your consideration.

Sincerely,

Sean O. Cota, President & CEO
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[1] U.S. Census Bureau, *American Community Survey,* Fuel Oil Use by Occupied Housing Units, Five-Year Average (2011-2015).

[2] *Ibid*.

[3] U.S. Energy Information Administration (EIA), *Sales of Distillate Fuel Oil for Residential & Commercial End-use*, Five-Year Average Distillate Fuel Oil, Residual Fuel Oil and Kerosene Consumption (2012-2016). Does not include fuel use for industrial, rail, marine or farming applications, in on or off-road engines or electric power generation.

[4] U.S. Census Bureau, *American Community Survey,* Fuel Oil Use by Occupied Housing Units, Five-Year Average (2011-2015). For this chart, "heating oil market" is defined as a market in which one-percent of homes utilize fuel oil as their primary heating source.

[5] Estimate of total constituents utilizing fuel oil based on a U.S. average of 2.6 persons per occupied housing unit. Total value is rounded to the nearest hundred.

[6] "Bioheat Fuel" is a registered trademark of the National Biodiesel Board.

[7] National Oilheat Research Alliance, *Survey on Mechanical Issues Related to Biodiesel Blending*, March 2017, p.2.

[8] Ultra-low (15-parts-per-million) heating oil has been required in the state-wide heating oil market in New York since 2012; in Philadelphia, Pennsylvania since 2015; and in Delaware and New Jersey since 2016. New England states and the District of Columbia will require ultra-low sulfur heating oil on July 1, 2018. Low (500-parts-per-million) sulfur heating oil is currently required state-wide in Maryland, Pennsylvania, Massachusetts, Rhode Island, Vermont, Connecticut and the District of Columbia.

[9] *Ibid.*, p.12.

[10] *Ibid.*, p.9.

[11] Based on the U.S. Energy Information Administration's estimate of 22.40 pounds of CO_2 per gallon of heating oil (*Carbon Dioxide Emissions Coefficients,* February 2, 2016*)* and a 4% percent CO_2 reduction under a five percent biodiesel blend. Calculated using the U.S. Environmental Protection Agency's *Greenhouse Gas Equivalencies Calculator* at https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

[12] *NORA Biofuel Report to Congress,* p.15.

[13] National Biodiesel Board, *Bioheat Emissions Reductions Findings,* January 26, 2017 and the Biodiesel Emissions Calculator at www.biodiesel.org/handling-use/emissions-caclulator. Values rounded to nearest whole number.

[14] National Oilheat Research Alliance (NORA), *Developing a Renewable Biofuel Option for the Home Heating Sector: A Report to Congress, State Governments and Administrator of the EPA,* May 2015, p.3. Hereafter abbreviated *NORA Biofuel Report to Congress.*

[15] *Ibid.*

[16] "Oilheat Consumer Perceptions and Attitudes Research Study," Warm Thoughts Communications, conducted between May-July 2015. Summary available at https://www.indoorcomfortmarketing.com/inside-the-mind-of-todays-home-heating-oil-customer.html.

[17] Malik, Naureen S., "Cold Snap Makes New England the World's Priciest Gas Market," *Bloomberg Markets,* December 26, 2017, https://www.bloomberg.com/news/articles/2017-12-26/cold-snap-makes-new-england-the-world-s-priciest-market-for-gas.

[18] The state of Rhode Island requires a five-percent blend in all heating oil sold in the state effective July 1, 2017 (see 23 RIGL §23-23.7); and New York City effective October 1, 2017 (see NYC Admin. Code §24-168.1).

[19] 22 CMR 16.05(1)(a)(6)(a)(vii)

[20] Calculated using the method under Footnote 11, but with an 8% carbon reduction under a ten-percent blend.

[21] Summary of the Global Warming Solutions Act at https://www.mass.gov/service-details/global-warming-solutions-act-background.

[22] Meyer, Cal, *Testimony on Behalf of the National Biodiesel Board*, House Ways & Means Committee, Subcommittee on Tax Policy, Hearing on Expired Tax Provisions, March 14, 2018, p.2.

[23] *NORA Biofuel Report to Congress,* p.15.

[24] U.S. Environmental Protection Agency, *Analysis of 2016 Renewable Fuels Standard RIN volumes*, January 19, 2017.

[25] It will also help preserve market confidence and certainty as the federal government reevaluates other policies that effect the markets for biodiesel and biodiesel-blended heating oil, such as trade policies the EPA's Renewable Fuels Standard.