

## BIODIESEL CAN HELP NEW YORK ACHIEVE ITS CLEAN ENERGY GOALS

### Environmental Solutions

**B10** 10% Biodiesel eliminates 100 million gallons of heating oil, the equivalent of making 102,000 homes carbon neutral.

**B20** 20% blend produces a 14.6% reduction in CO<sub>2</sub> emissions and better GHG performance than natural gas (NESCAUM).

**B50** 50% biodiesel use eliminates 500 million gallons of heating oil and 4.29 million metric tons of carbon.

**B100** 100% biodiesel use eliminates 1 billion gallons of heating oil and 8.59 million metric tons of carbon.

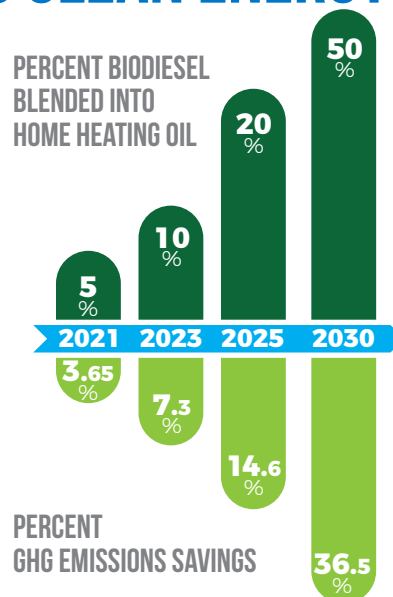


Biodiesel blended heating oil also reduces SO<sub>x</sub>, CO<sub>2</sub>, particulate matter and mercury emissions (NESCAUM).

### EMISSIONS IMPROVEMENTS: BIODIESEL VS LOW SULFUR (LS) AND ULTRA LOW SULFUR (ULS)

AVG. CHANGE	PAH	CO	NO <sub>x</sub>	SO <sub>2</sub>	CO <sub>2</sub>
Percent	-90 to -95%	Similar to -15%	Similar to -25%	-98% (LS) Similar (ULS)	-73%

### HEATING INDUSTRY PROPOSAL TO LOWER CARBON EMISSIONS



### Economic Solutions

**\$4B** Home heating oil is a \$4 billion industry

**1.6M** NYS households consume 1 billion gallons of heating oil

**753** NYS home heating oil retail businesses

**8,609** full time jobs



### CURRENT LAWS

NYS law requires 5% biodiesel blending in space heating applications in Westchester, Nassau and Suffolk counties

New York City law requires biodiesel blends of 5% (2017), 10% (2025), 15% (2030) and 20% (2034)

Sources: Macor, A., Pavanello, P., Performance and Emissions of Biodiesel in a Boiler for Residential Heating, Energy, vol. 34, 2009.C; Krishna, C.R., Biodiesel Blends in Space Heating Equipment, Brookhaven National Laboratory, 2001; USDA/DOE 1998, Life Cycle Inventory of Biodiesel and Petroleum Diesel for Use in an Urban Bus; Lee, S. Win, He, I., Heritage, T., Young B., Laboratory Investigations on the Cold Temperature Combustion and Emissions Performance of Biofuels Blends, 2003; U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>; NESCAUM, "Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues," December, 2005, p. 2-7